

# **Green Consumerism**

## **The Buying Behaviour of Late Millennials and Gen Z in the German Non-Alcoholic Beverage Industry**

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## Abstract

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Title of the thesis <b>Green Consumerism: The Green Buying Behaviour of Late Millennials and Gen Z in the German Non-Alcoholic Beverage Industry</b>		
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Abstract <p>The main objective was to examine which external or internal factors motivate members of the generational cohort of Late Millennials and Gen Z to participate in green buying behaviour, in the context of the German non-alcoholic beverage industry. As those motivational factors can differ from psychographics and individual interests to the influence of one's external environment on certain priorities and norms, there was an identifiable need to adapt green marketing strategies to the preferences of the newest generation, which will be the main part of the examination within this thesis.</p> <p>Consequently, the theoretical background was elaborated according to an extensive literature research with a strategic keyword search according to Denyer &amp; Tranfield on platforms like Google Scholar, JSTOR and ResearchGate, as well as the snowball search method to find even more specified information on this niche topic.</p> <p>The survey was conducted following a quantitative approach and then sent out and distributed via social media channels. Most of the questions were close-ended and were queried using different Likert scales, with which participants had to evaluate or indicate their personal frequency of engaging in different situations and scenarios. 171 citizens fully completed the questionnaire, which was then transferred into the statistical analysis programme SPSS for further evaluation and hypotheses testing.</p> <p>The main findings were that the surveyed Late Millennials and Generation Z are significantly purchasing single-use bottles and cans the least frequent but are not yet ready to commit to engage in regular green purchases, which is currently on an occasional level. They are on the edge of switching from a moderately green consumer to a truly green consumer but will probably not do so until the awareness and communication streams around this topic will be enhanced to a great deal.</p>		
Keywords green consumerism, green buying behaviour, Generation Z, Gen Z, non-alcoholic beverage industry, German beverage industry		

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## 1 Introduction

### 1.1 Background

Environmental deterioration, expeditious population growth, pollution and overconsumption are trends, which are widely discussed as *the central, long-term problems of modern man* (Meadows et al. 1972, 17) since decades. If humankind continues to exploit natural resources, by overconsumption, in the same speed and extent as hitherto the consequences of climate change will be irreversible, and a global equilibrium will not be matched anymore.

Therefore, pressure for environmentally friendly actions has increased in recent years, especially fuelled by the current climate change debate. Related protests and demonstrations such as the youth-led *Fridays for Future* movement, which has been initiated by Greta Thunberg in 2018, calls the government, whole industries, and the public to action (FFF 2021). And even though the Covid-19 pandemic caused a decline in greenhouse gas emissions, the UNEP Emissions Gap Report (2021) states that those will much likely increase again as the industry is recovering, which are mainly caused by the top 10% income earners due to their lifestyles and travel expenditures as well as the top 100 fossil fuel companies. To effectively tackle the problem of overheating our planet, the minimization of methane emissions from the agricultural, waste and fossil fuel sector can help to slow down global warming more time effectively than cuts in carbon dioxide outputs.

Although the primary fault and need for drastic operational change is seen at the level of government and industry, as well as the top 10% of income earners, who alone accounted for *52% of the emissions added to the atmosphere between 1990 and 2015* (Oxfam Int. & Stockholm Environment Institute 2020), average consumers must also participate to force reductions in carbon and methane emissions, plastic pollution, water waste and regulatory requirements to ensure the earth's regenerative health despite carbon inequality.

The seventeen Sustainable Development Goals published by the United Nations (2015) are another example for the entire business community being called upon to increase their ecological awareness and educational efforts until the year of 2030. As recent developments have shown with catastrophic floods in Germany (Eddy & Erlanger 2021) and China (BBC 2021), a record heat wave in Sicily (Korosec 2021) and the pipeline leak setting the sea on fire in the Gulf of Mexico (Stillman 2021) are just recent examples of the disastrous consequences that man-made climate change will bring in the next decades if nothing changes on a global level.

Research shows that *consumers behaviour is shifting gradually toward green consumerism* (Rajagopal 2021, 68). Besides the awareness from all kinds of media, which describe an ecologically friendly lifestyle as one of the main drivers, which could reduce plastic pollution and help against climate change, the communication streams of those green products are often quite confusing and lead to consumer frustration instead of enlightenment (Seo & Scammon 2017). As Green consumerism is mainly driven by social constructs and belief systems (Tsai et al. 2020), consumer behaviour is highly influenced by the people an individual surrounds itself with, whether voluntarily or mandatorily. Muralidharan and Xue (2016, 236) even found that in India *social networks influenced millennials more than their exposure to mass media* concerning their attitudes towards green product offerings and their overall green buying behaviour. For marketers as well as the scientific research community, it is therefore of special interest whether this phenomenon of preferring peer communication over mass media communication is the same in developed countries like Germany and whether it is coherent with green efforts from the non-alcoholic beverage industry.

Furthermore, the situation of Millennials and their attitude towards green consumer products has been analysed (Chaudhary & Bisai 2018; Naderi & Steenburg 2018; Jain et al. 2020), as they were the newest generation with some monetary power, for quite some time. Naturally there is a certain information stream accessible, but the viewpoint of Gen Z, who are primarily actively protesting and familiarizing themselves with the urgent climate matters, has not been researched to a large extent. However, their buying behaviour is of great interest and will therefore be further examined in a restricted scope.

## 1.2 Objective and research questions

The aim of this bachelor thesis is to gain insights into the participation of Late Millennials and Generation Z in green purchasing behaviour in the non-alcoholic beverage industry in Germany. It analyses how internal drivers such as psychological and character factors or external drivers such as the environment in which we operate, including peers, family, and media communication. In particular, the generation of Late Millennials and Gen Z, defined in this paper as those born from 1990 to 2005, are increasingly interested in alternative products that have low switching costs but protect the environment within their value chain and/or at the point of disposal.

Since research has been able to show gaps between the mere attitudes and ultimate consumption behaviour of Millennials, this thesis focuses on the currently dominant Gen Z generation, which is gaining tremendous importance in marketing strategies and communica-

tions. Since this work is not only aimed at identifying motivators for green beverage purchases and possibly highlighting gaps between positive attitudes and non-green purchase decisions, but the additional part of this research is also to identify patterns and then segment green consumers to gain a deeper understanding of how green marketing strategies can be improved. The focus will hereby be primarily on the marketing communication aspect as young consumers seem to rely more on recommendations and opinions of their peers and/ or family in comparison to used mass media communication. If green customers can be segmented by frequency or level of interest in purchasing green beverages, the type of communication can be adjusted accordingly. Overall, the main objective of this thesis is to gain a deeper understanding of green purchase motives within the Late Millennials and Generation Z cohort.

The research problem of this thesis therefore describes how the green purchasing behaviour of Late Millennials and Generation Z in the German non-alcoholic beverage industry is composed and how marketing communications can help to target them more efficiently.

Following the objective and the research problem, the research questions to be answered in the course of this thesis are formulated as follows:

1. Which internal (external) drivers steer the attitude and buying behaviour of German Late Millennials and Gen Z to actively buy (or reject) green products?
2. How can green consumers be segmented in order to yield green marketing benefits?

### 1.3 Delimitations

As the target group within this thesis are Late Millennials and Gen Z, who were born between 1990 and 2005, the non-alcoholic beverage industry appeared to be the most suitable fit when addressing green buying behaviour. The topic of green consumerism includes various industries which could not be farther away from each other in terms of opinions as well as monetary accessibility. For instance, the green automotive industry has been instantly excluded from the research scope as the age of participants will range between 16 and 31 and therefore most of them are not equipped with the monetary power to afford electric automobiles. Then, the fashion industry is a currently wildly discussed topic with numerous attempts to educate the public about grievances. Nonetheless, the selection of slow fashion clothing or even second-hand shops is not universally distributed among Germany. With respect to that, the opinions on this topic (while excluding online shopping) will be highly dependent on the living situation of each participant and their monetary means as switching

costs from a known brand to a green fashion brand can be quite high. After tedious consideration, the non-alcoholic beverage industry seemed to be the perfect fit as everyone can build an opinion around the topic irrespective of age or living location as well as with respect to low switching costs in the soft drink and water bottle industry.

The empirical delimitations within this thesis process are the target group as well as area to which the questionnaire will be sent out to. Starting with the target group, it would tremendously exceed the reasonable scope of a bachelor's thesis, and time accessible, to query the general public. Considering various age spans and generations to derive motivational viewpoints on why green products are chosen and due to which belief systems and motivators would not be manageable. Therefore, this thesis will conduct surveys on the cohort of Gen Z's and Late Millennials' opinion. This target group has been chosen because as digital natives, they are easily reachable through social media, which eases the numerical data collection through the online platform used to conduct the questionnaire. Also, green consumerism and the attached concept of green buying behaviour with Gen Z is still a novel research topic as not yet the entire generation has monetary strength and therefore new trends and tendencies in specific areas and industries must be further investigated.

The restriction of the green product industry to non-alcoholic beverages and to the territory of Germany has similar reasons. Conducting a survey, which targets a universal set of participants from all around the world would cause various difficulties. Suitable distribution channels for a worldwide poll would be quite hard to find to receive utilizable answers and the amount of data that would have to be stored easily exceeds standard capacities. Furthermore, every culture and nationality have different opinions depending on their upbringing and several other internal and external reasons, which would not be manageable to analyse in a narrow time frame. Therefore, the concentration on Germany will narrow down the data amount and ease the conception of precise questions as well as data analysis.

#### 1.4 Theoretical framework

Companies instrumentalize green marketing campaigns to distinguish their product portfolio from the remaining market offerings and set a sign that they have realized the need for environmentally conscious products. The complement to green marketing is called green consumerism, which works in symbiosis and is experiencing an increased popularity.

In general, the concept of *consumer behaviour is a process which is evolved within the market, society, and consumer personality ecosystems leading to a synchronic path of satisfaction, loyalty, and behavioural continuum towards buying decisions among consumers*

(Rajagopal 2021, 73). This term can be further specified within the green consumerism context.

According to Peattie & Charter (1992, 118), green consumerism can be broadly defined as *purchasing and non-purchasing decisions made by consumers, based at least partly on environmental or social criteria*. Another approach is to define green consumerism as the relocation of responsibility onto the consumer, who adapts environmentally friendly behavioural traits for the end goal of environment perseverance and environmental crisis minimization (Jain et al. 2020, 95). This manner predefines the comprehension of tackling environmental problems and bridle the climate degradation as a problem, which can be solved to some extent with activism from the demand side.

The people that act within this mindset are described as green consumers, who *can be identified to be one who avoids any product which may harm damage to any living organism, cause deterioration of the environment during the process of manufacturing or during the process of usage, consume a large amount of non-renewable energy, involves unethical testing on animals or human subjects* (Elkington 1994).

A common misconception in various research papers is the equalization of ethical, sustainable, and green consumers or goods. Those terms are wildly used as synonyms, although they concentrate on different aspects as their foundation, which leads to frequent confusion of the customers. The definition of something being green includes, apart from describing the external outlook of the product, every measure that is actively benefiting the environment. It focuses on the responsible treatment of natural resources and adds promotional value to products and processes that are utilizing environmental resources in a way, which leads to no harm for future generations and minimizes harm on nature.

The ethical term is not distinctively defined, but mainly refers to the working conditions of employees at every stage of the supply chain, which sew clothing items, plant and harvest agricultural crops or assemble electronic devices. Furthermore, it refers to the compensation those workers are paid concerning the maintenance of a living standard and health care (Sudbury-Riley & Kohlbacher 2016; Carrigan & Attalla 2001).

Sustainability basically combines the two previously defined terminologies as it is concerned with economic, social as well as environmental benefits at large. The main focus lies on the future and the alignment of the whole system according to it without comprising future generations or natural resources (Brundtland 1987). To summarize *sustainable production comprises business practices that are sensitive to the environment (environmentally sound), responsive to the needs and interests of society at large (socially equitable), and*

*economically feasible to implement and maintain (economically feasible)* (Rodriguez-Sanchez & Sellers-Rubio 2020).

As the young generation of Millennials and Gen Z shows great interest in the availability of environmentally friendly products (Muralidharan & Xue 2016; Naderi & Van Steenburg 2018; Topić & Mitchell 2019; Jain et al. 2020) and resemble the target group for this research paper. it is necessary to define the terminologies and their upbringing.

Following recent studies, Klein & Sharma (2018) summarize Millennials as *people born during the period 1982 to 2000*, which is a supported definition from the U.S. Census Bureau (2015). But there are also other definitions describing the Millennial cohort as *anyone born between 1981 and 1996* (Dimock 2019) or in general people born during the last two decades of the 20th century (between 1980 and 2000).

Gen Z, as the generation directly following the Millennials (or Gen Y), are the cohort *born between 1995 and 2010* according to Topić & Mitchell (2019, 6). Scholz & Grotefend (2019, 173) define the birth year span of Gen Z even broader as *anyone born between 1990 and 2010*, which clearly overlaps with definitions of the Gen Y cohort.

As those generational definitions vary between 15- and 20-years spans, the exact distinction between those cohorts became quite difficult, which was the reason of combining those two generations for research purposes following the theory of cohort effects. Reasoning being the increased accuracy and reliability of generation-based research as cohort effects describe certain variations in beliefs and attitudes that people unconsciously carry through their lives. With that being said, the latest born millennials might have more in common with the earliest born Gen Z's than they have with their own (whole) generation (Topić & Mitchell 2019, 7). Therefore, the age span defined for the generational research of this paper are people born between 1990 and 2005, based on the generational 15-years span.

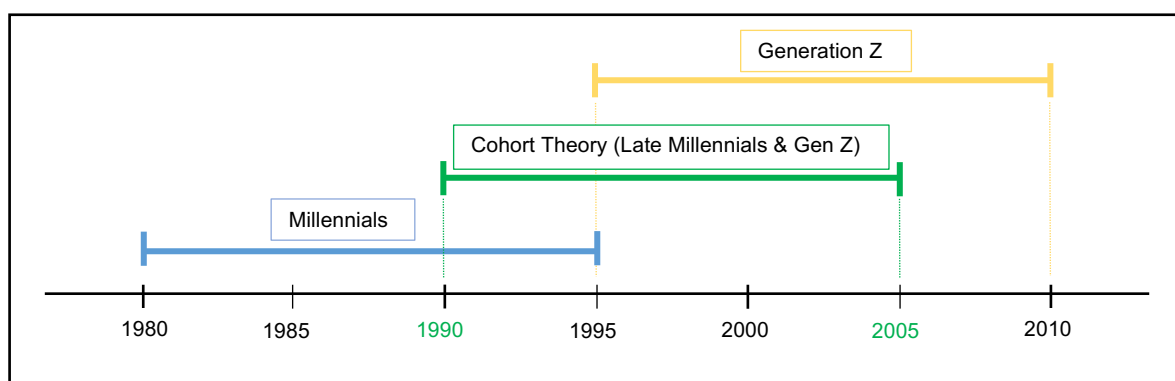


Figure 1: Generational birth year spans

Researchers found that although those two generations are highly interested in green products and show positive attitudes towards the availability of environmentally conscious offers, there is still a gap between their stand and actual behaviour, called the attitude-behaviour gap (Naderi & Van Steenburg 2018; Rodriguez-Sanchez & Sellers-Rubio 2021). More precisely, this phenomenon shows that *although individuals declare to have high positive attitudes toward the environment or organic products, it does not necessarily translate into actual purchase behavior* (Rodriguez-Sanchez & Sellers-Rubio 2021, 6). This predicament is based on the theory of planned behaviour (Ajzen 1991), which is one of the most widely cited sources within this research field, explaining that observable behaviour can be predicted based on subjective variables such as *attitudes (i.e., mental disposition and feeling about the environment)*, *perceived behavioral control (i.e., ability to perform the behavior)* and *subjective norms (i.e., social pressure)* (Rodriguez-Sanchez & Sellers-Rubio 2021, 6).

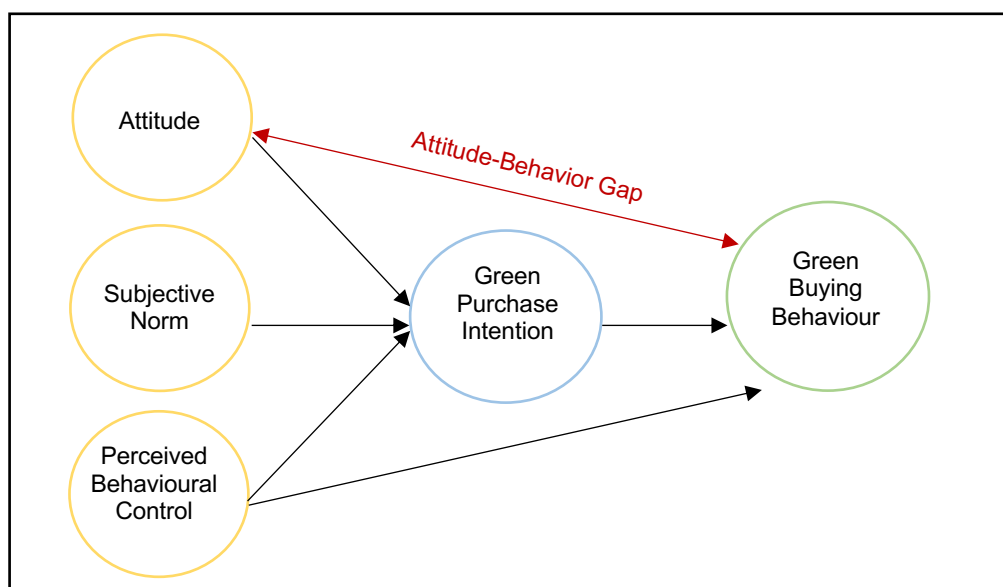


Figure 2: Theory of planned behaviour (Ajzen 1991)

These theoretical frameworks and concepts are applied in the context of the non-alcoholic beverage industry in Germany. As the food and beverage sector is responsible for about a quarter of annual energy consumption in the European Union and is the dominant sector of the economy, accounting for 15% of total manufacturing sales, it becomes particularly clear why behavioural changes in this consumption sector are of enormous importance. In particular, general beverage consumption in Germany has a high thermal energy demand, which can be reduced by lowering consumption and switching to innovative and green technologies in the production process. (Meyers et al. 2016.)

As UNEP's Emissions Gap Report (2020) notes, citizens can minimize the potential impacts of climate change by changing their lifestyles, as household consumption accounts for

two-thirds of global greenhouse gas emissions. Especially Germany leaves a high indirect foreign carbon as well as water footprint of household consumption, which can be tackled with behavioural change and a redirection to resource-saving options (Ivanova et al. 2016).

## 1.5 Thesis structure

The entire dissertation report is divided into 7 chapters, which in turn are divided into several subsections to provide the reader with in-depth information on the dissertation topic.

The introduction chapter mainly touches the background on the research topic and discusses its relevance as well as current importance to open up the actual research need on this phenomenon. Furthermore, the first chapter discusses the objective, research problem as well as research questions which shall be answered during the main three chapters of the thesis. The limitations and theoretical framework of the thesis' topic form the foundation of the paper, presenting the reader with the main definitions and showing the limitations of the research objective to clarify the scope to be analysed.

Within the following three chapters, the theories and concepts underlying the topic of the thesis are explained in detail, with the third chapter dealing with the generational aspects of Late Millennials and Generation Z, the fourth chapter explaining the concept of green consumption and its sub-concepts such as green purchasing behaviour and green marketing, while the fifth chapter introduces the reader to the specifics of the German beverage market. In these three chapters, hypotheses are formulated, which are then to be tested in a questionnaire. The research methodology and data collection used in this process is discussed in the fifth chapter, which summarizes the hypotheses formulated and explains the method of survey implementation in more detail. The sixth chapter is then the design of the questionnaire based on previous research and relevant scales from research papers, while the seventh chapter deals with the procedure of data analysis as well as the results from descriptive statistics as well as intercorrelations and hypotheses testing.

Finally, the eighth chapter answers the research questions which were posed based on the theoretical framework and consequently provides directions for future research and practice, followed by the bibliography and appendices.

## 2 Late Millennials and Generation Z

### 2.1 The German culture (Hofstede)

To comprehend the unique behaviour and attitudes of Late Millennials and Generation Z in the German context, it is of utmost importance to comprehend the cultural peculiarities within the country itself. The assessment of the six different cultural dimensions according to Hofstede (2015), which are described as

- Power Distance,
- Individualism/Collectivism,
- Masculinity/Femininity,
- Uncertainty Avoidance,
- Long Term Orientation/Short Term Orientation &
- Indulgence/Restraint

can help identify the cognitive programming those German citizens have learned over the course of their lives. Collective programming is a social phenomenon and probably not a universal mental programming, which is most likely inherent and shared by the entire human species, or an individual mental programming, which is highly dependent on the genes we inherited from our parents and our unique personality, which distinguishes one group of people from another based on shared values, norms, ways of communicating, decision-making and reasoning processes. (Hofstede 1980.)

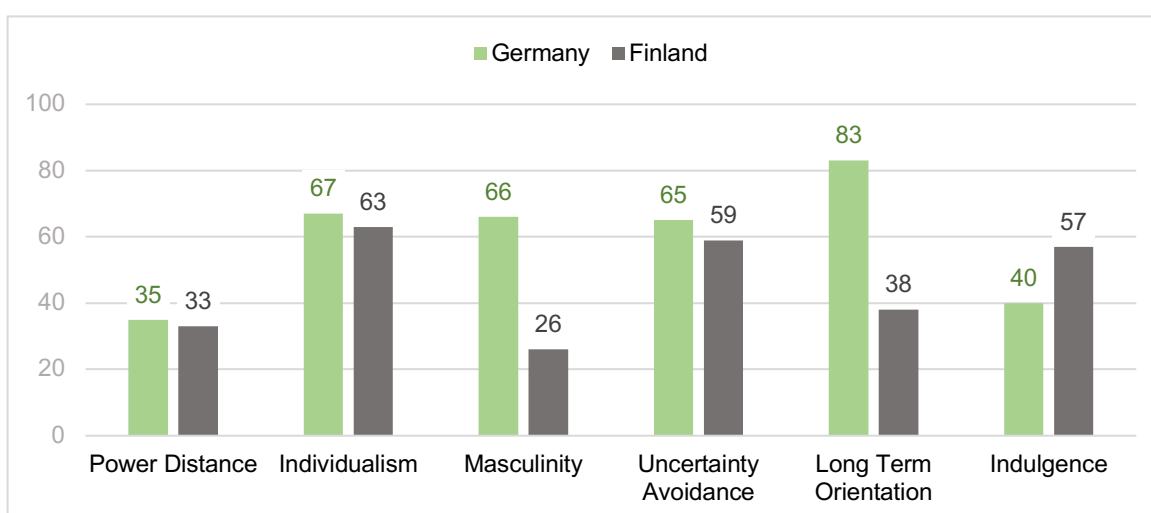


Figure 3: 6-D Cultural dimension of Germany and Finland (Hofstede Insights 2021)

Starting with the first dimension, power distance describes the degree to which a society accepts that institutional or organisational power is not distributed equally across the society. Germany scores here quite low, which expresses that hierarchical roles are rather established for convenience, subordinates are expected to be consulted rather than simply dictated what to do and parents communicate with their children at eye level (Hofstede 2011, 9; Hofstede Insights 2021), which can foster a peer-like communication foundation.

The degree of individualism describes the sense of community within the society, whereby Germany scores quite high and can therefore be characterized as a truly individualistic society. Being straightforward and honesty is highly appreciated in the German culture as well as a high need for privacy, which matches the tight loyalty bonds and hyper focus on immediate family and selected peers rather than the whole society (Hofstede 2011, 11).

Continuing with the third dimension, masculine societies are defined as performance driven cultures with high competition, whereas female societies value a healthy work-life balance and do not measure themselves by their career successes. Germany scores again quite high and is a deeply rooted masculine society, where high performance and overtime are glorified, and status symbols are desired (Hofstede 2011,12; Hofstede Insights 2021).

Uncertainty avoidance is quite strong within the German culture as they rely heavily on established structures and seek their comfort in safety and known procedures over embracing risks to gain greater outputs (Hofstede 2011,10; Hofstede Insights 2021).

Precisely because members of the German culture feel most comfortable in established and familiar scenarios, they are also very pragmatic and build their society with a long-term focus on the future in mind. Adapting traditions to future developments is valued just as much as perseverance as a top quality to ensure a successful personal and professional path. In contrast to striving for steadiness and security to avoid unnecessary risks, when it comes to the future, people admire the fact that they change according to the different circumstances that present themselves. By orienting themselves strongly to future scenarios, Germans seem much more likely to evaluate the results of their actions before executing them (Hofstede 2011,15; Hofstede Insights 2021).

Finally, according to Hofstede Insights (2021), Germany ranks low on the *indulgence* scale, which ultimately means that people who grow up with this social programming are naturally reserved and strive to control their impulses. Furthermore, they place a low value on their leisure time and feel controlled by their own established social norms. This feeling stems from the fact that they are remotely controlled by the government and institutions that have established strict norms that must be followed (Hofstede 2015, 16), which also creates a sense of uncertainty to which extent oneself can drive change.

## 2.2 German Millennials

The term Millennials describes a generation whose members were born between 1982 and 2000 according to the U.S. Census Bureau (2015), i.e. roughly in the last two decades of the last century. In 2020, there will be 22 million people in Germany who belong to Generation Y and make up almost one-third of the total population (Pawlik 2020), whereas Millennials make up for 23% of the total population worldwide (MSCI 2020). Since Germany is a country with an aging population, Millennials are not the predominant group and do not yet have the greatest purchasing power, but they are in fact the successors to Generation X, which were born between 1965 and 1980 and followed the Baby Boomers.

In line with the previous analysis of German culture according to Hofstede, German Millennials are also characterized by the pursuit of security in their career path, the avoidance of unnecessary risks, the high value placed on continuous education, and health as well as monetary independence (Pawlik 2020). Although Millennials have grown up with drastic changes in the economic climate on a global scale, German Millennials have experienced quite stable and prosperous times, as they did not actively experience the changes brought about by the division of Germany or reunification, as they were too young or not yet born. Despite the economic crisis in 2008, the terrorist attacks in 2011 and the resulting Iran war, German Millennials see globalization as an advantage that has brought positive changes and remain optimistic about the future, as the economic crisis had little impact on the German economy. In fact, unemployment rates among young people in Germany were the lowest compared to other EU member states at the time, leading to a high level of pragmatism in the attitudes of German Millennials, which is in line with the typical German mentality. (AICGS 2020.)

Due to the global pandemic in 2020, health and job security rose as priorities of German Millennials, but environmental concern remains at the top of the list of concerns. A survey conducted with 500 Millennials in Germany (Deloitte 2019) revealed that they view the main responsibility for progressive change towards environment preservation at governmental level, but simultaneously fear that current business leaders will not prioritize action for the prevention of climate change (Deloitte 2021, 21). This perception is in line with the findings of Muralidharan & Xue (2016, 227) that recent surveys imply that Millennials in general are quite interested in environmentally sound products but tend to have a hard time converting this interest and positive attitude towards green products into actual buying behaviour. Due to lack of involvement or uncertainty avoidance, German Millennials could feel restricted in transferring their attitude into behaviour as green products are seen as an inconvenience rather than something aspirational. (Naderi & Van Steenburg 2018, 4.)

A study of 276 participants (Naderi & Van Steenburg 2018) conducted in the United States found that the willingness to act in an environmentally friendly manner stems from a rather selfish viewpoint. As young Millennials, also called Generation Me (Stein 2013), are more self-interested and rational, which is in line with the German mentality of individualism, than emotional and focused on others. Although they recognize global warming and pollution as the most pressing problems, they feel powerless, which leads to their inability to put their positive attitudes into action. Even though Millennials are said to be less set in their brand preferences and show willingness to spend a lot of time searching and locating environmentally friendly products, which are ideal conditions. (Kassaye & Hutto 2016, 30; Mboga 2017, 106; Chaudhary & Bisai 2018; Topić & Mitchell 2019).

## 2.3 Late Millennials and Generation Z in Germany

### 2.3.1 Generational effects (Cohort Theory)

The generational research has been focusing on the cohort of Millennials for decades, because they have been the novel and most powerful cohort around the globe with increasing buying power exceeding the previous generations. As the Generation Y can be broadly defined as citizens born between 1980 and 1995 (McCormick 2016), the youngest of the cohort are currently 26 years old (in 2021), meaning that the whole cohort has reached their adolescence and provided research in terms of their characteristics, attitudes, belief systems as well as buying behaviour in different kinds of segments and scenarios. As quite extensive information streams are available for Millennials, the focus of researchers is increasingly shifting towards the attempt to understand the subsequent cohort Generation Z. Despite variations in definitions, the cohort following Millennials can be identified as people born between 1995 and 2010 (Scholz & Groetefend 2019), which means that the youngest members of this cohort have not yet reached puberty with 11 years old while the oldest of Generation Z are in their mid-twenties (in 2021). Because there is also research available which defines Millennials from 1980 to 2000 (Hauw & Vos 2010; Hartman & McCambridge 2011) and Generation Z from 1990 to 2010 (Topić & Mitchell 2019) or respectively from 1997 to 2012 (Dimock 2019), the variation in definitions leads to the impression that generational cohorts cannot be exclusively separated from each other, which implies that the young members of the Generation Y, in this thesis referred to as Late Millennials, are relevant in the attempt to understand Generation Z better. (Topić & Mitchell 2019, 6.)

When talking about generations there are different theories, which need to be separated as they describe the influence on people's attitudes and behaviour over time from three different approaches, which will be discussed shortly. Ipsos MORI (2018) distinguished between

period effects, life cycle effects and cohort effects, latter being the one used in this thesis.

Period effects describe events that have fundamentally changed the environment people live and grew up, such as wars, social movements, or economic fluctuations, which affect all cohorts by changing their attitudes to the same extent over the same period of time (Butler et al. 2017; Ipsos Mori 2018; Topić & Mitchell 2019, 7). The starting point of this induced change is most likely a specific date and has nothing to do with the age people are at that time. Of course, inflation affects adults more than young children, as they are the ones who work for a living wage and experience the fluctuations in their monetary value, but children are also affected, as they may grow up in wealthier or poorer circumstances. But technological and innovative advances also correlate to period effects as new vaccinations such as the Covid vaccine in 2020 or the availability of new clinical procedures affect all age groups equally and simultaneously (Holford 2016, 2).

Opposed to period effects, which are based on external changes in the environment on a national or global level, life cycle effects describe the changes in attitudes and behaviour that we ultimately experience as we grow older, as our internal biological characteristics change according to the different stages of life (Ipsos Mori 2018). They are tightly correlated to the specific age at which a person experiences a change in sensibility, perspectives, and hormonal influence as a child, an adult or an elder (Smith 2008, 289-291; Holford 2016, 2). Ultimately, this means that we grow into certain changes in attitudes and behaviours, as a student may have different ideas about life and various issues that are very different from those of an older person, but as students grow older, their attitudes may become more similar to older people (Butler et al. 2017).

Finally, the cohort theory: Those effects describe that a cohort defined by year of birth correlates with different views that persist over time as the generational cohort ages and can be seen as a development rather than an occurrence based on a specific event (Ipsos Mori 2018; Holford 2016, 2). By recognizing the marginal differences between cohorts and their associated characteristics, research and thus marketing strategies can be more precisely and accurately targeted to these cohorts. Topić & Mitchell (2019, 7) also note that these marginal differences result in young Millennials (Late Millennials) having more in common with the following generation, in this case Generation Z, than they do with older participants of their own generational cohort. This is the concept used to define the target cohort group in this paper. The targeted cohort span was set to a range of 15 years, which is consistent with the previously found generational definitions and results in a range of birth year from 1990 to 2005. Generation Z is defined by various definitions as people by 2010 or even 2012, but citizens born between 2006 and 2012 were actively excluded as they no longer

share the characteristics of Generation Z, being more consistent with the following generation, Generation Alpha.

Since the literature on Generation Z is not yet extensive, as not all members of this cohort have reached adulthood, cohort effects are an excellent tool for analysing generational behaviour because they include late members of the previous generation, the Late Millennials. This can provide researchers with clues about what to expect from Generation Z by examining the unique developmental patterns and variation in characteristics in this new cohort, as they have the advantage of measuring relationships between variables (Cohen et al. 2007, 217), showing that diversity within cohorts is increasing, especially with the rapid advances of the Internet and digital connectivity. The constant accessibility to information streams about various topics also increases awareness of certain issues, such as the currently pressing topic of climate change and green consumption. When choosing new marketing strategies, marketers should aim to shape their communication streams according to the preferences of generational cohorts. (Eastman et al. 2019, 5; Topić & Mitchell 2019, 8.)

### 2.3.2 Economic, political and technological environment

Late Millennials and members of the Generation Z, defined as people born between 1990 and 2005, make up for 17% of the total German inhabitants in 2021 (Statista 2021; Knupp 2021). On a global scale, Generation Z have already surpassed the Millennial and Baby Boomers in 2019 with a share of 32% of the population worldwide (Spitznagel 2020). As Germany has an aging and stagnating population, Late Millennials and Generation Z may not be the generation with the most members and highest buying power, but their strength and importance for future developments and new topics should not be underestimated.

As Generation Z are defined as digital natives (Scholz & Grotefend 2019, 185), it comes to no surprise that this generation spends its leisure time with listening to music and engaging in internet activities such as the usage of social media, which overhauled the television consumption. Thus, the young citizens have become accustomed to have an all-time connection to an endless source of information as well as ways of communicating with friends and family (Scholz & Grotefend 2019, 172f.). Furthermore, the members of Generation Z are especially diverse and inclusive, which may stem from the continuous internet accessibility and high educational level. These online communication channels can be particularly useful for sharing opinions on purchase recommendations, gathering information on pressing issues, or organizing movements around the world, such as the Fridays for Future movements in which Late Millennials and Generation Z played an important role. In this context, Generation Z has also shown that they stand up for their beliefs and have a strong urge to make their voices heard in a peaceful way. (Turner 2015, 104-106.)

The economic situation in which the German members of Gen Z have grown up is phenomenal, as Germany is not only known for its economic prosperity but is also characterized by a very low unemployment rate among young people. Since there are virtually no high student loans in Germany, a very high number of Gen Z attends universities, resulting in a high level of education among young people. Similar to economic stability, a stable political system is also a landmark of Germany, as the ruling president is elected by the majority of the *Bundestag* (German parliament) and a coalition between two or three political parties usually emerges (Scholz & Grotefend 2019, 174-176). In 2021, the German parliament election will take place again, which means that most members of the Late Millennials and Gen Z could vote for the first time that year, and some even for the second time. Compared to previous generations, Gen Z grew up in a stable global environment with excellent prospects, which meant they had the freedom to fully engage socially, leading to a high level of political interest as they sought to maintain their stability. Generation Y experienced more instability, which caused them to become more self-centred. (Ranke 2021).

In particular, the German government's management of change during the Covid pandemic led young citizens to reconsider their political orientation. The young cohort was particularly challenged when universities and schools closed their doors for several months and jobs seemed impossible to find. Flexibility and digital literacy were the critical attributes Generation Z needed to demonstrate, although this also increased educational inequality as not everyone could handle distance learning. The outcry for their accustomed stability was imminent, as was the commitment to climate and environmental protection, which was expressed in the tendency to vote for the green party, as they saw the political parties as primarily responsible for promoting and facilitating the purchase and consumption of environmentally friendly products. (Ranke 2021; PwC 2021.)

### 2.3.3 Values, belief system and attitudes

According to research on Generation Z in Germany, they are increasingly valuing traditional aspects of life just as family, respectively having their own family, and the retention of a small circle of trustworthy friends. Environmentally conscious behaviour is also valued by Generation Z and interestingly, the consumption of regional and organic products as well as an overall healthy nutrition are by far more important to them than the consumption of cigarettes or alcohol. Accordingly, they developed suiting purchase demands. Independent from the monthly income, do young consumers view environmentally sound products as too expensive and are only willing to pay those prices if the sustainability criteria are fulfilled and they can sense that the company is truthfully trying to lessen the impact their production cycle has on the environment. Another restriction to turn attitude into continuous behaviour

is the narrow selection of ecological alternatives and mistrust in eco-labels or the available information from companies concerning their product attributes (Scholz & Grotefend 2019,179; Topić & Mitchell 2019, 15; PwC 2021).

Although they grew up in prosperous times, they are an anxious generation who are very concerned about their future and see environmental pollution as the third greatest threat to society. Their constant concern for the future of our planet and the preservation of the environment, which influences their decisions in both the private and political spheres, is a perfect example of their future orientation. The position of the economic situation as one of the least feared developments underlines the stable state of the economy that Generation Z has experienced so far. And although Generation Z aims to find fulfilment and passion for their work, their aspirations for their working lives include earning a high income. Generation Z's focus on the future and their monetary anxiety about the future are a sign of frugal behaviour because they don't live in the moment but have their eyes on the future and take measures to prepare for contingencies. (Scholz & Grotefend 2019,180-183.) According to findings by PwC (2021), 90% of German Gen Z are willing to invest more money in products that can be reused over a longer period of time and repaired, if necessary, which is another indicator of the frugality of the younger generation.

In contrast to Generation Y, whose behaviour was used as a benchmark for the creation of Industry 4.0, Generation Z strives for more job security with fixed salaries, permanent contracts and a better work-life balance, which shows a development from the highly masculine German culture to a more feminine dimension. Most of the young citizens surveyed choose to work for a company and build their careers within corporate boundaries, which is an indicator of the cohort's high willingness to take risks, as few aspire to self-employment. German youth recognize their employer's flexibility to offer remote work as an option rather than an obligation to maintain said separation of work and family while having that flexibility for possible family planning. (Francis & Hoefel 2018; Scholz & Grotefend 2019,183-187.)

Despite some similarities between Millennials and Generation Z in Germany, such as low brand loyalty when purchasing products, Generation Z has a very different outlook on life and tends to be more altruistic, as evidenced by Deloitte's Generation Study (2021, 28), which shows that Generation Y successors exhibit more altruistic behaviour than they do. Generation Z is passionate about creating change and wants to achieve a sustainable lifestyle, but seems to fail at implementation, recognizing that the greatest need for drastic change lies with institutions and not ultimately with themselves.

## 2.4 Conceptual framework and hypotheses

Psychographic variables have been used by researchers to enhance their understanding of consumer activism and environmental awareness and to shed light on consumer behaviour in terms of segment formation (Wells 1975, 209). In academia, psychographic variables are considered to directly influence attitude formation because they are based on past experiences and behaviours (Seounmi & Hyuksoo 2008, 124) and are considered to be more informative of engagement in green consumer behaviour than demographic variables (Dutta-Bergman 2006, 104; Chen & Chai 2010; Akehurst et al. 2012, 977; Albayrak et al. 2012; Afonso et al. 2018; Naderi & Van Steenburg 2018), as sociodemographic variables have a more indirect influence on purchasing behaviour, directly influencing psychographic variables by indicating certain attitudes based on for instance participants' age (Redler & Hurth 2020, 42). As indicators of attitudes toward green purchase intention and ultimately green purchase behaviour, selfless altruism, frugality, future orientation, and risk aversion were borrowed from the Millennial survey by Naderi & Van Steenburg (2018) and adapted to the characteristics of Generation Z (in Germany).

### **Selfless-Altruism**

Within the altruistic approach, the motivation for altruistic behaviour is, on the one hand, selflessly focused on increasing the well-being of another person or group of people, e.g., by donating to a charity, and, at the same time, increasing the feeling of self-reward for having participated in a socially regarded behaviour (Feigin et al. 2014, 4). German Late Millennials and Generation Z are individualistic and tend to focus their attention on their immediate family and friends rather than following collectivist approaches, which runs counter to focusing on the well-being of strangers. Nonetheless, German Generation Z shows that they care deeply about the environment and see pollution as an attack on society (Scholz & Grotefend 2019, 181). According to Geller (1995, 192), the prerequisite for turning this concern into action is the ability to look beyond one's own satisfaction and focus on the well-being of the entire community. Since Late Millennials and Generation Z in particular see government and industrial institutions as having the primary responsibility for taking action to protect the environment, which is supported by the findings of Naderi & Van Steenburg (2018, 17) and PwC (2021), it is assumed that commitment to green consumption stems from personal self-interest rather than concern for society as a whole. Therefore, the first hypothesis was stated as follows:

H1: Selfless altruism of Late Millennials and Generation Z does not tend to result in a positive attitude towards green consumption behaviour.

## **Frugality**

Consumers' level of frugality is measured by how carefully they manage their financial and physical resources and proactively avoid waste (DeYoung 1985, 284). Generation Z does not spend its money wastefully, showing no loyalty to brands, but rather wants its money to go further. They carefully weigh what they spend their money on and question the high prices of environmentally friendly products rather than spending it wastefully (PwC 2021). However, if green products prove to be highly trustworthy and companies accurately communicate their efforts to reduce negative impacts on the environment, they will spend money on them. Topić & Mitchell (2018) found that Millennials and Generation Z try to avoid plastic in packaging and buy single-use products that reduce waste and have strong attitudes toward recycling. Conscious consumption and willingness to spend more money on items that can be reused, recycled, or repaired (PwC 2021) are ways of frugal behaviour to save money in the long run and reduce their impact on the environment, which then leads to environmentally conscious behaviour (Scholz & Grotendorf 2019,179). Therefore, it was hypothesized that:

H2: Late Millennials and Generation Z who show more frugal behaviour tend to have a positive attitude towards green consumption behaviour.

## **Future orientation**

The concept of future orientation essentially describes consumers making decisions about their behaviour with a constant eye on the future and the future outcomes of their behaviour. People with this orientation evaluate the consequences of their actions in the long term and think before acting impulsively (Naderi & Van Steenburg 2018, 10). German Late Millennials and Generation Z show a high degree of long-term orientation, carefully weighing their own actions against the consequences, in contrast to the selfish tendencies of their predecessor generation, the Millennials (Scholz & Grotendorf 2019,181). Engaging in environmentally friendly purchasing behaviour has long-term implications rather than immediate responses. Forward-thinking citizens are more inclined to participate in green purchases because they see the long-term benefits. In addition, because Generation Z has seen previous generations repeatedly fail at implementing green practices, they want to secure their own future, as they will have to live with the consequences of current actions for the longest time. In this regard, general future orientation is seen as a predictor of Generation Z's green consumption behaviour (Naderi & Van Steenburg 2018, 11), which consequently leads to the hypothesis that:

H3: Late Millennials and Generation Z who show a higher future orientation tend to have a positive attitude towards green consumption behaviour.

## Risk aversion

Risk aversion is the formation of intentions to prefer the purchase of known products, as consumers are most likely to want to avoid risks. In this context, the term risk describes an evaluation of a product based on subjective consumer characteristics that assess product price, switching costs between conventional and alternative products, and experience with the product and whether enough information is available or known to assess the overall risk or benefit of purchasing that product (Paladino 2015, 72). Late Millennials and Generation Z show a willingness and positive attitude to participate in green consumption and regional products (Scholz & Grottefend 2019, 179), but the reason this attitude does not translate into behaviour, also called the attitude-behaviour gap, discussed later, is the inconsistent flow of information about green products. There is a distrust of eco-labels (PwC 2021) and a general confusion about the life cycle of disposable products such as beverages. Thus, there is a risk associated with purchasing these alternative products, and since Gen Z tends to be risk averse, the inadequate flow of information significantly influences their purchasing behaviour, leading to the following hypotheses:

H4: Late Millennials and Generation Z who show a high degree of risk aversion tend to have a negative attitude towards green consumption behaviour.

## Summary

To summarize the four hypotheses formed during the generational chapter, an extension of the Theory of Planned Behaviour was constructed by highlighting the influence of those psychographic variables on attitude:

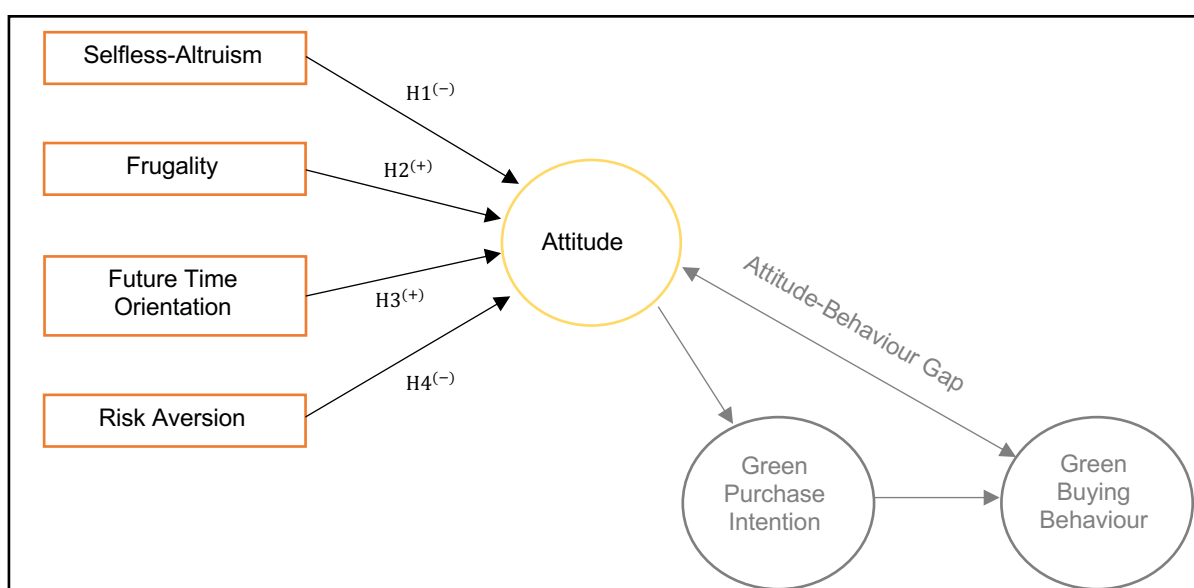


Figure 4: Hypotheses of Psychographic Variables on Attitude

### 3 Green Consumerism

#### 3.1 The distinction of Green

As Green Consumerism describes the basic principle within this paper, a further look must be taken at the meaning of the term *green* in this context. Originating from the colour theory it is a secondary colour mixed out of the two primary colours blue and yellow, which creates stimuli attached to certain perceptions and symbols. Depending on the cultural background the colour green is either perceived as a negative symbol of illness and envy or resembling trustworthiness, freshness, hope and luck. Sometimes there is even a mixed symbolism such as green has the reputation of representing envy as well as hope in Germany.

Nevertheless, green is also commonly associated with nature, being associated with grass, plants, and trees. This concept is firmly integrated into the Chinese and Japanese languages, for example, where the character for green consists of the letter for fresh and the one for red, symbolizing the colouring of young fruits and plants. (McNeill 1972, 31.)

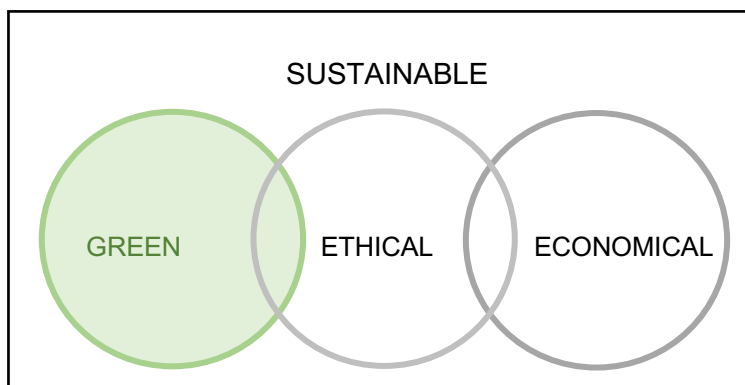


Figure 5: Distinguishment of green terminology

Within the scope of consumerism, the prefix green refers to the purchase of *environmentally friendly* (Chan 1996, 43) and ecologically sound products that minimize the dreadful impact of the product on the environment. Picket-Baker and Ozaki (2008, 283) correctly highlighted that there is no product, which is truthfully green as the production of consumer goods is always attached to some extent of negative impact it will have on the environment. This can translate to different stages within the product lifecycle from sourcing energy from non-renewable sources to the operation of machines used in the process, the transportation with trucks from production site to the supermarkets or steps attached with the product disposal. Nonetheless, the degree of environmental harm or impact can be classified according to the scale of environmental influence, which generally translates to the less harm a product does to the environment within its value creation and disposal cycle, the greener it is.

Research has identified that the precise definition of the terminology green in the consumer-

ism spectre is quite complex as various literature focuses on different elements, product types or restraints (Durif et al. 2010, 26), which naturally results in misconceptions and misuse of different terminologies as synonyms. Analogous synonyms for the describing term green are ecological, environmentally friendly (Durif et al. 2010, 27) or even environmentally sustainable, but in literature terms like ethical or the sole term sustainable are misused for that purpose to describe green products as definitions tend to be vague.

The term ethical for instance mainly focuses on issues of human welfare (Sudbury-Riley & Kohlbacher 2016, 2697) meaning the payment of fair wages to a liveable extent as well as the protection of workers at their workplace in terms of safety and health. Initiatives as FairTrade provide a framework to ensure those conditions, but additionally include some terms and regulations on the ecological aspects, which leads some research papers to focus on the green part of the term ethical (Sekerka et al. 2014) predominantly with recycling issues. This can be misleading and steers the focus away from pressing topics like (corporate) social responsibility, social justice and human right issues, which make up the second larger part of the term (Carrigan & Attalla 2001; Sudbury-Riley & Kohlbacher 2016).

With everything taken into consideration, the term sustainable describes in the consumerism sphere, every product or service that takes the previously discussed ethical and green sphere into consideration but adds the economical component with its political attributes and aims to meet the current needs of customers without jeopardizing future generation's capability to fulfil their basic needs (Glavič & Lukman 2007; Kuhlman & Farrington 2010; Emas 2015). Therefore, the green attribute is included in the construct of sustainable development and consumption, but only partially. Sustainable describes a quite complex phenomenon, which is mainly ruled by governmental initiatives rather than consumer behaviour.

The difference between green consumerism and sustainable consumption was examined and contrasted by Cooper (2000, 47), which highlights the fundamental differences of those two concepts. Following his approach, green consumerism means that consumers switch to other niche products apart from the conventional ones and therefore views the act of consumption still as something positive, whereas the main idea of sustainable consumption describes a reduction of consumption apart from basic needs. A high degree of sustainable consumption throughout the society can also be harder to achieve as the focus lies on the self-regulation of the consumers, which regulate the demand instead of providing the consumer with innovative alternatives and technological advancements, which replace the conventional version of a product with a greener one, which can decrease the harm to the environment to a large extent. (Cooper 2000.)

### 3.2 Green Marketing

Environmental marketing, more often referred to as green marketing in literature, can be defined as the entirety of measures a company takes to establish and ease the satisfaction of consumer's needs and wants in a manner which minimizes the ecological impact the design, promotion, price, and distribution activities have on the natural environment (Polonsky 1994; Cherian & Jacob 2012). Thereby the 4 Ps of marketing mix are greened as follows:

To be widely accepted by customers, the design of green products should be clearly distinguishable from conventional products with suitable colour usage and user friendliness, whereby the technological aspect of environment friendliness should play a vital role. Also, the product should fulfil the need and wants of a broad customer spectre, highly convenient to use without sacrificing quality and first and foremost have a biodegradable or at least reusable packaging. As firms are increasingly wrapping their products in plastic to save transportation costs and such, they do not contribute to the change even if the plastic can be recycled as the process of recycling releases toxic gases, which is not eco-friendly. (Vaibhav et al. 2015, 6.)

Generally speaking, are environmentally friendly products costlier than conventional ones as the technology and infrastructure behind green products is more lavish. Nonetheless should the switching costs be at that level that a high customer number is still able to afford it and especially understands the background of the price compilation (PwC 2021). Many consumers tend to view biodegradable packaging or even green products themselves as less effective, especially in terms of cleaning products, which conversely would not justify a high price for a perceived low effectiveness, even if this is not the case.

Another important factor to ease customers into switching to eco-friendly products is the green place or distribution network. As for green beverages the distance of transportation between supermarkets and refill points for multi-use bottles plays a vital role, the scope of distribution partners will be influenced to some extent. Supermarkets should therefore actively signpost the availability of green products in their aisles to heighten recognition (Vaibhav et al. 2015.)

Consumers still tend to lack green knowledge as due to incoherent communication efforts between companies and consumers (Cherian & Jacob 2012, 123), which highlights the importance of green promotional activities. Thus, promotional material should be biodegradable itself, and the advertising message should not contain confusing terminologies, instead clear identifiable labels and messages which actively highlight the benefits of purchasing green items as well as how they contribute to less harm on nature (Vaibhav et al. 2015, 7).

### 3.2.1 Opportunities for the supply side

As consumers become increasingly environmentally aware, the industry for ecologically friendly products is becoming larger and companies can utilize this trend to gain competitive advantage over companies which do not offer alternatives to conventional products. With clear promotional activities, those companies can utilize niche opportunities as a differentiation criterion and create trust and loyalty with environmentally conscious consumers as well as with those who strive to change their lifestyles and purchase behaviour in that direction. (Peattie & Charter 1992, 736; Polonsky 1994)

### 3.2.2 Problems for the demand side

In contrast to firms that make a genuine effort to improve their environmental efforts and want to provide consumers with serious ecological product alternatives, there are also companies instrumentalizing this new trend and market development to their own benefit to attempt in market share gains. They are greening their marketing strategies on a superficial level as they are not necessarily investing in a restructuring of their product attributes or transportation ways, which leads to misleading claims and confusing promotional activities, which can create a high level of mistrust among consumers, which can have a negative impact on the entire green industry. Sometimes customers cannot distinguish at first glance between trustworthy and fake marketing claims, which can create a boycotting behaviour from the demand side. (Polonsky 1994.) This phenomenon of misleading consumers about a company's green practices or a product's environmental benefits is referred to as greenwashing and forces consumers to independently research and learn about the actual actions companies are or are not taking to contribute to positive change, which is time and energy consuming but worthwhile for product and brand choices (Schmuck et al. 2018).

### 3.3 Green consumer

#### 3.3.1 Historical overview

Consumer movements and activism to disseminate educational information and research findings to society are a phenomenon that has been practiced for centuries and due to a variety of societal problems. The crucial need of these movements, which arose for a wide variety of reasons and starting points, was that they all had one thing in common, namely a certain degree of distrust in the ability of governments or certain industries to address these problems. Thus, the society members did not want to leave their own fate to the arbitrary decisions of the state, but proactively promote change themselves and, in the best case, exert enough pressure on the institutions concerned to force them to act. (Boström & Klintman 2008, 17.)

Because the initial identification of acid rain in the 1850s took several decades to be properly addressed, a new movement emerged after World War II in the 1950s and early 1960s, the *environmental movement*, with the two main goals of improving and protecting the environment (Hays 1981, 219; The Guardian 2020). Simultaneously with the post-World War II prosperity in America, which brought great economic changes, American society began to shift its focus from work to leisure and to strongly question its consumption patterns. At the same time, the industrial sector began to grow with the construction of new industrial and power plants, the development of airlines and highways to provide new and more time-efficient transportation. As this industrial progress grew, so did concerns about pollution and contamination of water resources by hazardous chemicals. (Hays 1981, 220.)

For Europeans and their unions, consumption was considered second only to production and economic growth. Although this trend of prioritizing production over consumption was evident around the world, a new movement emerged in the 1980s that focused on consumption, revisiting the earlier goals of the 1970s but instead of restricting consumerism by actively boycotting certain products. This new movement aimed to alternating the products consumers were already buying with environmentally friendly alternatives that could be more easily integrated into their lifestyles, so to say the birth era of green consumerism. Occurring food scandals and crisis boosted the popularity of conscious consumption in Europe, as citizens experienced a decrease in trust towards the food and beverage industry and were more willing than ever to invest more time into the questioning of their consumption patterns and research the origin of their groceries to avoid the risk of choosing the wrong products or production companies. (Boström & Klintman 2008, 21-23.)

Today, digitalization and the enormous amount of information available have added *Fridays For Future* to the green consumer movement, putting immense pressure on companies and the government. Ignorance of environmental issues or trying to portray themselves as environmentally friendly even though they have not adapted their value chain accordingly immediately cause a stir and have a hard time maintaining their reputation. On the other hand, it also holds many opportunities, as companies can now inform consumers about their efforts to produce less harmful products through honest marketing and credible labels, as young consumers in particular also identify themselves through green consumption efforts.

As for the government, with the outbreak of the Covid 19 pandemic, the younger generation has seen that political systems, and especially entire governments, have the capacity to actively drive change when it is needed (The Guardian 2020). This vulnerable information could potentially lead to further pressure on the government from the younger generation if they can overcome their innate frustration and effect change through voting, protesting, and translating their ecologically based attitudes into actual consumer behaviour.

### 3.3.2 Green consumer profile

Due to the positive developments in protecting the environment, the nature of consumption also began to change as consumers actively sought ways to replace the conventional product portfolio with alternative products that have less impact on the environment (Akehurst et al. 2012, 974). This development gave rise to the concept of green consumption, which essentially describes the idea that the responsibility for addressing the climate or environmental crisis lies in the execution of green purchasing behaviour by consumers (Jain et al. 2020, 95) and thus can be seen as a social phenomenon (Rajagopal 2021, 68).

Akenji (2014, 13-15) defines green consumption more as a construct that addresses the product market, changing the perspective from the sole responsibility of the consumer to the additional responsibility of the market to create and promote products that are less harmful to the environment, which then enables the consumption of green goods and services by the consumer. The definition proposed by Akenji (2014) complements the symbiosis of supply and demand in a crucial way, as consumers can only buy green products if there are companies that produce and promote these green goods and services, while this market is only created by the willingness of demanders to pay for these green products.

In this paper, green consumption is defined as a social phenomenon that shifts the responsibility for addressing the environmental crisis to the exercise of environmentally friendly purchasing behaviour by consumers, guided by the evaluation of the environmental claims of production and the promotional activities of companies.

Equally important to the evaluation of green consumerism itself is to analyse what a green consumer resembles. Researchers give a variety of different definitions due to various viewpoints those clarifications can be reached.

Kirgiz (2016, 66) defines green consumers from the psychological perspective as *a person who thinks that the environmental protection matter can't just be left to government, business circles, environmentalists but bears responsibility*. This definition includes the critical attitude that green consumers, or people invested in ecological behaviour, have toward the inability of institutions and governments to solve the problem themselves. Hereby, the green consumer does not see itself as completely responsible for change, but to a large extent.

In shorter form can a green consumer be understood as someone who inherits the inclination that explains the importance of environmental (resource) protection through consumer behaviour (Haws et al. 2014, 337). This main identification through the environmental concern is also reflected in the environmentally conscious consumer definition by Roberts (1996, 222) defining individuals who choose their products after comparing and evaluating which one causes the least or not any environmental impact. This definition is partly problematic due to the assumption that there are products with absolutely no environmental impact as every product impacts the environment with water usage or transportation even if those impacts are minimized, they are never zero (Ha 2008, 9). Thus, the definition from Afonso et al. (2018, 138, according to Hailes 2007) can be preferred over the previous one as here, green consumers are defined as those *who associate the act of purchasing or consuming products with the possibility of acting in accordance with environmental preservation*.

The decision to purchase green alternatives over conventional products is a process guided by several variables that may be internal in nature, such as subjective psychology, product knowledge, geographic location, laws, culture, social environment, and infrastructure (Peattie 2010, 199). To initiate this process, the consumer must identify a need, which may be based on satisfying basic needs such as food, drink, or the pursuit of security. Because humans are a social species, there are also needs that correlate with belonging to that external group by having the emotional goal of being accepted within that group, achieving a certain status, or striving for self-actualization (Peattie 2010, 200). These emotional components are especially true for the young generation of Late Millennials and Generation Z, as their personalities are not yet fully established across the generation, and on the one hand they strive for behavioural recognition by peers and family or use their consumption patterns to differentiate themselves from their social peers, which may be expressed in wants rather than needs or a shift in their necessity assessment.

Therefore, the search for information on whether to buy a product and the evaluation of whether the company offering the product and the product itself are trustworthy usually starts with asking family and friends. In addition, there is the possibility of searching for such information on the Internet, which is an important tool for the generation of digital natives. This network of information gathering also means that young consumers can be quite overwhelmed with the number of options and choices available, as new products are constantly coming onto the market that need to be evaluated for their usefulness (Ha 2008, 16).

Green consumers invest a lot of time and energy in searching for alternatives to conventional products, which can lead to a decrease in consumption, as not using a particular product is considered the better option because the alternatives are not satisfactory, or to a redistribution of their purchasing activities to green products that meet personal needs in a less environmentally harmful way. The second option, which is the basic concept of green consumption, causes the consumer to evaluate the use and disposal of the targeted goods. In the case of beverage consumption, the use process is the same whether it is a conventional product or a beverage with green characteristics. Here, the main differentiator is the method of disposal after the useful life, which depends on the information available, whether the bottle is recycled, refilled, or otherwise disposed of. The key trigger for whether the product is purchased is then a consumer's individual environmental literacy in terms of understanding the extent of the environmental issue and the impact that their individual purchasing behaviour can have as part of the solution to the problem. If the company offering the product is then also trustworthy and clearly communicates the product benefits (e.g., with standardized eco-labels), consumers will have the courage to translate their positive attitudes and intentions into actual green purchasing behaviour. (Peattie 2010, 199-201.)

Finally, the benefits of green consumption are many and include both personal and societal environmental benefits. For example, a shift in consumer demand occurs as environmentally conscious consumers purchase green alternatives, reducing the overall demand for harmful goods and decreasing production. This reduces the number of non-renewable resources and keeps them available for future generations, which includes more efficient use of water resources. This can happen during the manufacturing process, as some beer producers look for ways to make their beverages with less water or buy food regionally and seasonally. Reducing overall emissions can also be achieved by purchasing products from manufacturers that source their energy from renewable sources and offer reusable products that allow for a longer use cycle, as well as implementing measures in daily life, such as closing windows when the heat is turned up. In summary, the additional cost of purchasing environmentally friendly products can be offset by their longevity and long-term resource and energy savings. (Ha 2008, 11-15.)

### 3.3.3 Green consumer segmentation

As the emergence of green consumers increases due to the visibility of developments, government efforts and industrial consequences, it is critical for marketers to differentiate between different green consumer types. By segmenting the different green consumer types by buying behaviour, psychographic characteristics, and attitudes, the green marketing mix can be developed and improved accordingly. As different segments express different attitudes and behaviours, such as paying attention to buying regional products, products with the least environmentally harmful characteristics, or preference for plastic, recycled plastic, or glass packaging in the beverage industry, these can be indicators of the level of environmental friendliness integrated in consumers buying behaviour and show how invested different types of green consumers are in their environmentally friendly behaviour. Thereby several studies occupy that the segmentations of green consumers can vary from those who developed the habit of purchasing green into their lifestyle and self-identification, some only purchase green products if it is convenient or by coincidence and some are not even considering this option. (Kirgiz 2016, 64f.; Afonso et al. 2018, 143.)

Based on various studies on the segmentation of American green consumers, Afonso et al. (2018, 143-145) developed five segments to categorize green consumers as a compilation of the previous identified segments, matching the green gradations (Wang et al. 2018, 334):

The environmental leaders, which are described as the ones who are the most proactive in their ecological consumption as they inherit strong values and attitudes towards green products, who actively translate their intention into actual buying behaviour are referred to as true green consumers and depict the role models across the consumer segments. They tend to be environmental activists and strive to enhance the green knowledge within the society.

Directly following the truly green consumers are the ones who are willing to pay a higher amount of money towards green products than the average consumer but will only do so if those items are available in their usual environment. They see the time required to allocate green products in supermarkets or places outside their usual routine as an obstacle and are not always willing to make this extra effort due to convenience.

Forming the midfield of the green consumer segmentation are the moderately green consumers, who are concerned about the environment and believe that their buying behaviour can contribute to the solution of climate crisis to some extent, but they are only participating in green purchases if the switching costs are low, and their main needs are met.

In penultimate place are the occasional green consumers, who, as the name suggests, occasionally buy green products because they care about the environment but feel that their individual purchasing behaviour can do little to solve global problems. It can be derived that they see the main responsibility on the level of authorities and not at societal level.

The consumer segment with the least concern about environmental issues are apathetic consumers, who absent from taking pro environmental measure and do not change their consumption patterns at all as they do not care about the ongoing crisis on a personal level.

To summarize, the segment of green consumers is continuously increasing, which elicits the further investigative research of this phenomenon in different market and industry segments, especially in Europe as most research has been conducted in the United States in the beginning of the 21<sup>st</sup> century. Thereby a tendency was found by the GfK Roper Consulting that the consumer segment of truly green consumers is continuously increasing whereas the number of apathetic consumers is visibly decreasing. Nonetheless are the moderately green consumers still the strong centre as most consumers has once purchased a green product, but variables such as time (availability), quality and cost are still restraining them from converting this into an actual habit. (Kirgiz 2016, 66; Afonso et al. 2018, 145f.)

Although the research aiming at achieving the segmentation of green consumers utilized sociodemographic variables such as gender, age, level of income as well as educational level, with the increasing novelty of research it has been repetitively found that although sociodemographics help to categorize consumers, they decrease in significance when psychographic variables are added (Afonso et al. 2018, 146; Naderi & Van Steenburg 2018). The researchers Chen & Chai (2010) argue that gender for example yielded very different results as early papers found significances between gender and environmental behaviour, their own investigation among others has not found a significant correlation, which makes it arbitrary. Similar results were found on the other demographic variables (Rodríguez-Priego & Montoro-Ríos 2018, 55) with little explanatory power on behavioural results. In this paper, the monthly expenditure on groceries is used to later serve as a segmentation criterion instead of the amount of income due to its lack of significance (Chen & Chai 2010).

### 3.4 Green buying behaviour

The concept of green purchasing behaviour is the ultimate goal of green consumption and describes the actual and especially frequent translation of green purchases into a consumption style, and thus the translation of positive attitude and willingness to pay into actual purchasing behaviour. In niche markets such as the green non-alcoholic beverage industry, companies face the particular challenge of drawing attention to the existing alternative product portfolio and communicating the benefits accordingly in order to convince customers.

In particular, the theory of planned behaviour (TPB) proposed by Ajzen (1991) describes that purchase intention represents a strong indicator of actual intention and purchase behaviour. Thus, this thesis aims to explain the green purchasing behaviour of Late Millennials and Generation Z in the German non-alcoholic beverage industry using the TPB concept.

#### 3.4.1 Theory of planned behaviour and hypotheses

The TPB is a direct descendant of the Theory of Reasoned Action (TRA), which was used as early as the 1970s and 1980s to predict behavioural intentions and/or behaviour because it breaks down the antecedents of behavioural expressions. For example, behavioural intention can be understood as a direct antecedent of behaviour and thus provides information about the likelihood of achieving a particular outcome if one performs a particular behaviour that leads to that outcome. Behavioural intention, in turn, has two antecedents, the behavioural belief that an individual's attitude influences the performance of a particular behaviour, and the normative belief that an individual's subjective norm(s) influence the performance of a particular behaviour. A defined boundary condition added to the TRA that would later lead to the emergence of the TPB (Figure 2) is the extent to which individuals feel they have control over the translation of intentions into actions. This third direct antecedent condition, which influences behaviour directly as well as indirectly through the behavioural intention, was termed *perceived behavioral control*. (Madden et al. 1992, 4.)

The addition of this component assumes that citizens who feel they have little behavioural control over a situation because they lack resources or opportunities are less likely to be invested in the actual behaviour, even though they may have a positive attitude toward the situation. In short, individuals engage in a particular behaviour only if they have the motivation and belief that they have the capabilities to do so. (Ajzen 1992, 181f.)

The first chapter has already discussed the four predictors of attitude to be analysed within this thesis (Figure 4), which leads to the need to further investigate predictors of both direct antecedents of behavioural intention, subjective norm, and perceived behavioural control.

### **Subjective norm**

The societal antecedent, social norm, is defined as the external perceived social group's pressure, which can encourage or discourage the individual to perform a certain behaviour (Ajzen 1991, 188; Jain et al. 2020, 97).

Social factors that influence the consumption behaviour of citizens include family, social roles such as membership in a club or other affinity groups. Collectives that have a direct influence on individual consumer behaviour are defined as membership groups, which can be further divided into primary and secondary groups. Primary groups in this case represent a collection of people with whom the consumer interacts on a regular and informal basis, such as family, peers, neighbours, and co-workers, while secondary groups describe organizations such as religious groups or labour unions that operate in a more formal setting with irregular interaction. (Kotler et al. 2005, 259f.)

Reference groups are collectives that shape an individual's tendencies for attitude and behaviour through face-to-face or indirect reference. A subset of referential groups is the aspirational group, to which an individual aspires to belong, but does not experience face-to-face dialogue as those members are mostly celebrities. Marketers continuously try to figure out to which reference group their target market identifies with to yield strategic benefits. They expose individuals to participate in certain lifestyles, steer their attitudes and behaviour and create some direct or indirect pressure for the individual to conform with their surroundings. Of particularly great value are thereby opinion leaders, as those are the ones within a referential group, who actively steer the attitudinal developments within those groups as early adopters, who exert the newest knowledge on others. (Kotler et al. 2005, 260.)

Family as a member of the primary reference group can be distinguished between orientational family, which describes the individual shaping towards economics, ambition, and self-worth by parents, and the procreative family, which describes the influence of spouses and children on everyday behaviour (Kotler et al. 2005, 261).

Tsai et al. (2020, 353) analysed the effect of social groups, hereby divided into normative and comparative referents on social norms. Normative referents are people, with whom individuals stay in face-to-face contact, so new information can be transferred by word-of-mouth, whereas comparative referents are typically idols, to whom we look up to and base our behaviour according to observations rather than direct contact. In contrast, Md Husin et al. (2016) analyses the impact on word-of-mouth and mass media on social norms. Word-of-mouth is hereby defined as the face-to-face communication between private parties, mainly peers and family, to exchange information, whereby mass media functions as an

universal information transmitter through the internet or radio, which influences the belief of individuals on what they should or should not do, through advertisements.

Both approaches yielded significant results on social norms. Since this thesis excludes the direct effects of celebrities as comparative referents and word-of-mouth is something experienced by normative referents, the societal factors analysed in this thesis are normative referents and mass media. Late Millennials and Generation Z have different opinions about those two types of societal factors. Because they place great value in the advice and opinions of their normative referents (Chaudhary & Bisai 2018; Scholz & Grotefend 2019; Tsai et al. 2020) and tend to be less influenced by mass media (Muralidharan & Xue 2016) the following two hypotheses were developed in the context of purchasing green beverages:

H5a: Late Millennials and Generation Z experience a positive relationship between normative referents and subjective norm to purchase green beverages.

H5b: Late Millennials and Generation Z experience a negative relationship between mass media and subjective norm to purchase green beverages.

### **Perceived behavioural control**

The third antecedent of social norms, namely perceived behavioural control, can be defined as the subjectively perceived ease or difficulty of performing a particular behaviour, based on past experiences as well as evaluated obstacles. It also describes to which extent individuals feel that their behavioural decision was driven by internal factors such as their skill-set, knowledge, capabilities, and discipline, by the resource availability in terms of knowledge, time and monetary sense or was guided by an external entity such as family and colleagues. (Ajzen 1991, 188; Jain et al. 2020, 97)

Madden et al. (1992, 4) specify that perceived behavioural control has a direct influence of behaviour as well as an indirect effect on behaviour via purchase intention. Whenever individuals believe that they experience little control over their behaviour performance, then they may lack motivation to execute said behaviour. In terms of green consumerism, it can be implied that complexity of ecological issues, ambiguous terminologies used in advertisements and especially the possible lack of knowledge from the consumer's side to differentiate and understand the entirety of the problem and solution can consequently lead to confusion about green products here green beverages (Seo & Scammon 2017, 358). This can translate to a feeling of a lack of behavioural control based on the lack of product knowledge, which Late Millennials and Generation Z are experiencing as marketing campaigns and companies often do not convey to what extent their products are beneficial for the environment or cause less ecological harm, which is why following hypotheses was constructed:

H6: Late Millennials and Generation Z's lack of product knowledge negatively influences the perceived behavioural control to purchase green beverages.

### **Purchase intention**

Behavioural intention, or the purchase intention in this study since green beverage purchase resembles final behaviour, is the central factor within the TPB. Those intentions are considered to be the collecting point of the motivational factors of attitude, subjective norm, and perceived behavioural control. Put together, they influence behaviour and indicate how much effort and willpower individuals are willing to give to actually perform the behaviour. (Ajzen 1991, 181.)

The paper of Ajzen (1991, 206) has shown that purchase intention of an individual can be predicted with a high accuracy from the aforementioned factors attitude, subjective norm and perceived behavioural control, which was supported by recent literature analysing social enterprise consumers (Tsai et al. 2020, 358), Millennials and Generation Z as green consumer (Noor et al. 2017; Chaudhary & Bisai 2018, 808; Jain et al. 2020, 100) and green consumers (Albayrak et al. 2012, 36; Klein et al. 2019, 8). Therefore, the following hypotheses were formulated and transferred to the Generation Z context:

H7a: Attitude positively influences Late Millennials and Generation Z's purchase intention towards green beverages.

H7b: Subjective norm positively influences Late Millennials and Generation Z's purchase intention towards green beverages.

H7c: Perceived behavioural control positively influences Late Millennials and Generation Z's purchase intention towards green beverages.

### **Buying behaviour**

According to the TPB, buying behaviour can be understood as the end result of the interplay between purchase intentions and perceived behavioural control (Ajzen 1991, 185), where the indirect path from perceived behavioural control to intentions and then to behaviour describes the influence of an individual's motivation towards executing said behaviour whereas the direct path from perceived behavioural control to buying behaviour reflects the actual control an individual has over the performance of a certain behaviour. The latter is most likely to be significant when certain aspects of the behaviour are not volitional, such as the consumption of beverages is to some extent not volatile as the body must be supplied with liquid, and the perception of an individual's control over the behaviour are accurate. (Madden et al. 1992, 4.)

Purchase intention can be defined as an immediate antecedent of behaviour, which indicates an individual's preparedness to participate in said behaviour and is said to be one of the main drivers of green buying behaviour across consumers (Jain et al. 2020, 98). Azjen (1991) derived that both perceived behavioural control and purchase intention are strong predictors of buying behaviour, in the case of intentions this was confirmed by Chaudhary & Bisai (2018, 808) in relation to green consumption behaviour of Millennials in India and Madden et al. (1992, 9) confirmed the strong correlation between perceived behavioural control and behaviour, which is why the following hypotheses were formulated accordingly:

H8a: Perceived behavioural control of Late Millennials and Generation Z positively influences their actual buying behaviour towards green beverages.

H8b: Purchase intention of Late Millennials and Generation Z positively influences their actual buying behaviour towards green beverages.

### 3.4.2 Attitude-Behaviour-Gap

In theory it is indicated by the TPB that the more beneficial the individual's attitude towards purchasing an economically friendly good or service is the higher is the purchase intention and accordingly the actual participation in green buying behaviour. However, generational, and environmental researchers also found that not all individuals who declare to have a strongly positive attitude towards green consumption, necessarily translates their attitude into actual purchase behaviour. This phenomenon is widely described in research as the *attitude-behaviour-gap* and is predominantly found in green consumerism research. (Lin & Huang 2011, 11; Topić & Mitchell 2019; Rodriguez-Sanchez & Sellers-Rubio 2020, 6.)

Academic researchers suggested several reasons for this attitude-behaviour gap, which depend on individuals themselves, given their limited resources and inability to break out of their habits and integrate them into their lifestyles. Others name brand loyalty as a barrier to switch to environmentally conscious products, uncertainties related to insufficient knowledge about the benefits, and perceived trade-offs related to lower quality or shelf life, which is more of a problem with FMGCs than with food and beverages. (Peattie 2010, 214.)

Kotler et al. (2005, 287) explains five different stages that consumers go through in their adoption process for new products, understood in the context of this thesis as the implementation of green beverage products in their purchasing behaviour. These phases are referred to as awareness, interest, evaluation, trial, and adoption. In this process, consumers first learn about the existence of the new product, then gather knowledge, are willing to try it if the available information is convincing and the trial makes sense, and then decide whether to include this product in their future purchase behaviour. The aforementioned gap

between attitude and behaviour could be reduced or closed if marketers support consumers in gathering information, especially in the interest and evaluation phase, and clearly present the benefits and impacts associated with the purchase of these green products.

### 3.4.3 Conceptual framework

To increase the explanatory power of the TPB, attitudes, subjective norms and perceived behavioural control were further decomposed into multidimensional constructs, which increases the understanding of those items by breaking down the influential factors (Taylor & Todd 1995, 140).

In total, twelve hypotheses were created within this research paper, which are going to be analysed in chapter seven. The conceptual framework will give an overview on how the TPB was decomposed and how the hypotheses are connected in between variables:

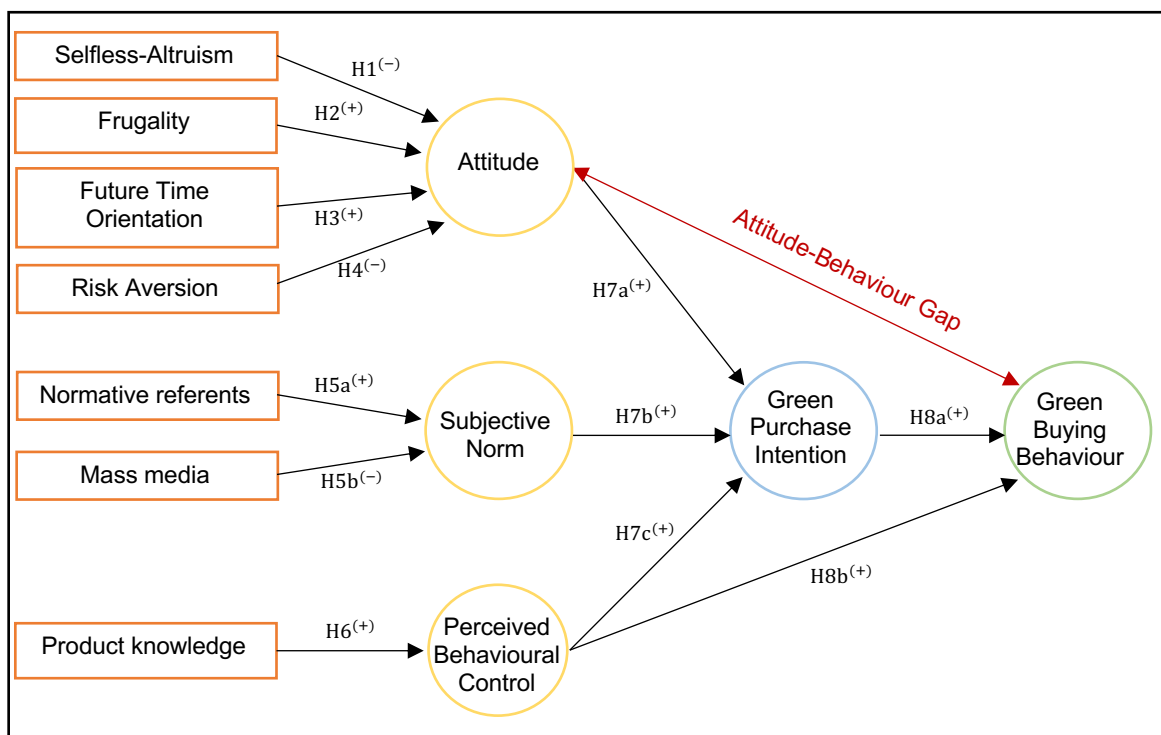


Figure 6: Conceptual framework (decomposed TPB)

## 4 German non-alcoholic beverage industry

### 4.1 Introduction

With a sales share of 8%, the beverage industry is the third largest sector of the food and beverage (F&B) industry (Stracke & Homann 2017, 12), with non-alcoholic beverages accounting for a share of 4.6%, i.e., more than half of the sales generated in the beverage industry. As Germany represents the largest market for soft drinks and alcoholic beverages across Europe, the national landscape is highly competitive and diverse. Average per capita consumption for bottled soft drinks and mineral water together reached 264 liters and accounted for the major categories in product value when the non-alcoholic beverage industry generated 6.7 billion euros. This diverse and non-alcoholic beverage-focused economy is also enabling new opportunities and innovation as demand for non-alcoholic beers increases, as does the consumption of green beverage alternatives. (GTAI 2018, 2f.)

With food and beverage, housing, and transportation accounting for the vast majority of household consumption, it is important to note that food and beverage consumption is highly dependent on natural resources and the corresponding environmental footprint we create through extensive use of land and water, which can impact soil fertility, eutrophication of watersheds, and increased emissions from the intermediate and final product distribution system (Risku-Norja & Mäenpää 2007, 701; Rodriguez-Sanchez & Sellers-Rubio 2020, 1).

Due to the above-mentioned impact on the natural environment, manufacturers in the F&B industry should be constantly aware of their energy consumption and emission levels. Although energy consumption accounts for less than 5% of total production costs, reducing energy consumption can lead to lower prices in the F&B industry and lower emissions. Companies are making efforts to reduce energy consumption by optimizing the efficiency of existing processes, switching to green energy sources, or introducing new technologies. Yet, there is a gap between available opportunities and practical implementation due to barriers such as lack of knowledge, organizational issues, or awareness, to name a few (Meyers et al. 2016, 267-270; Urbinati et al. 2019, 7).

Current trends in research on environmentally sustainable measures in the beverage industry are a) willingness to pay, b) packaging, c) distribution, and d) disincentives such as attitudes, beliefs, and purchase intentions. Studies primarily analyse sustainability trends in the complex wine industry because wine inherently has sustainable indicators such as seasonality. The beer industry has gained popularity in research due to the emergence of a variety of craft beers (Rodriguez-Sanchez & Sellers-Rubio 2020, 3-5), but this work sheds more light on the neglected non-alcoholic industry in the German context.

### **Willingness-to-pay and determining factors**

Previous research has found that Millennials, and Generation Z in particular, have a high willingness to buy environmentally conscious products, unlike any previous generation, and even complain that there are not enough choices in supermarkets (PwC 2021). They want to minimize their environmental footprint and, in this effort, even boycott companies, sometimes even their favourite brands, if they do not match their eco-friendly attitude and show a lack of environmental friendliness and social responsibility (Topić & Mitchell 2018; Chaudhary & Bisai 2018). Although the willingness-to-pay and the positive attitudes are ubiquitous among the younger generation, in this context, German Gen Z emphasize that they do not see suitable incentives from companies despite the belief that consuming green products can have a positive impact on the environment in the long run. Ecologically sustainable products are not recognizable as such and, due to a lack of communication channels that make the benefits of buying such products clear, Generation Z is not prepared to pay higher prices (PwC 2021).

### **Packaging**

On a global scale, 207 million tons of plastic, which reach a total value of around 331 billion euros are used for packaging purposes every year. Around 39.5% of Europe's plastic demand in 2014 was for packaging materials. Although the vast majority of this amount is recycled, much plastic packaging is discarded after use, leading to plastic pollution and waste in the oceans. (Urbinati et al. 2019, 2.)

The predominant types of packaging in Germany are PET (polyethylene terephthalate, a plastic produced mainly from petroleum or sugar cane) (NABU n.d.), glass or aluminium cans, and a variety of bottle types, which will be discussed in more detail in the context of the German waste disposal system. Recognizable developments include manufacturers' differentiation strategies, which are evident in a variety of packaging sizes, materials, degree of circularity (Urbinati et al. 2019, 9) and designs to set themselves apart from competitors. The variety of box shapes and sizes also underscores the trend toward individualism, which also perfectly reflects Generation Z's goal of standing out from the crowd rather than being absorbed into it. (Stracke & Homann 2017, 26.)

### **Distribution**

In terms of beverage distribution, the regionality of beverages has become more important (Rodriguez-Sanchez & Sellers-Rubio 2020, 4). Due to the increase in emissions from transportation, beverages that are nevertheless marketed as green lose their authenticity, as the

greenwashing case study of *Fiji water* has shown. It is not environmentally responsible behaviour to buy bottled water that is marketed as natural and therefore gives the impression of being green but given that the consumer is transporting that bottle around the world, the purchase of that water becomes exponentially less environmentally friendly the further it travels (Schmuck et al. 2018). According to the findings of Scholz & Grotfend (2019, 179), German members of Generation Z value the consumption of regional products, which is analysed as an item for the degree of green purchasing behaviour in the thesis' survey.

## 4.2 State of affairs

### 4.2.1 Water companies

The German water industry has had strong growth and demand is increasing towards low gas mineral water and gas-containing mineral water, each accounting for 40% of total sales from this sector. Nevertheless, gas-free water has increased in popularity and was mainly imported from abroad by companies such as Nestlé and Danone in 2015 (Stracke & Homann 2017, 20). Statistics from 2020 (Ahrens, 2021) showed that demand for mineral water has continued to rise, but the most popular mineral water brand among Germans is the regional brand *Gerolsteiner*, which has its headquarters in the Eifel region. The overtaking of previous favourite brands such as *Volvic* and *Vittel*, which operate under the umbrella of Nestlé and Danone, could indicate that the German population is indeed increasingly adopting green consumer behaviour, as Müller (2021) suggests for the general German population and Scholz & Grotfend (2019, 179) suggests for German Generation Z.

Although *Volvic's* and *Danone's* official websites state that the disposable bottles are made of 100% recycled plastic (Volvic 2021; Danone n.d.), this is plastic that was previously imported from France and is therefore not necessarily ecological from a German perspective. The purchase of such products becomes even more arbitrary, as there are numerous water companies within the German border that not only source their product regionally, but also compete with reusable disposable bottles that can be refilled up to 50 times and do not have to be transported across international borders (Deutsche Umwelthilfe 2018).

At this point, growth in the current mineral water market is only possible through increasing predatory competition. The best alternative to the consumption of bottled water remains the consumption of tap water, which in Germany is not only safe but also tasty for everyday use. Nevertheless, the development of tap water consumption is unpredictable in the long term (Stracke & Homann 2017, 21). The best way to prevent groundwater depletion and soil degradation would be to switch completely to tap water, but since this is not a realistic scenario, consumers need to be aware of the benefits of regionality and eco-packaging.

#### 4.2.2 Soft Drink companies

In 2016, demand for soft drinks fell overall, whereas the Coca-Cola company recorded positive growth in both original and mixed drinks. Companies have also already responded to rising health awareness with reduced-sugar or completely sugar-free products, while competitors such as *fritz-kola* can additionally score points with regionality benefits within the German society as well as authenticity. (Stracke & Homann 2017, 20-24).

The Coca-Cola group said it would continue to invest in multi-way beverages, which accounted for 39% of its total bottle packaging in 2019 but were still among the worst plastic polluters in the world (Coca-Cola Deutschland n.d.). Despite their efforts to develop innovative products such as a paper bottle or plastic bottles made from ocean plastic, the impact of these processes on the environment in terms of thermal energy and emissions remains unclear for the time being. (Coca-Cola Deutschland 2021). *MioMio*, on the other hand, is a soft drink company that has mastered all aspects of green beverages (aside from the necessary water consumption) by switching to green energy sources, distributing only returnable glass bottles, being regional, vegan, and finally carbon neutral (MioMio n.d.), which sets new standards in the industry. Finally, clear communication and the use of labels could overcome risk aversion and persuade people to buy, in spite of higher prices.

#### 4.2.3 Beer companies

Although Germany is a nation that bases its reputation, among other things, on its excellent breweries and beer products with more than 6,000 variants, the consumption of alcoholic beer has declined drastically, while the consumption of non-alcoholic beer has increased by 50% between 2010 and 2015. Above all, specialty beers such as craft beers are gaining in popularity. (Stracke & Homann 2017, 19-23).

As the brewing process is quite complex in itself, it can be further complicated by adapting this process to use less water and to make the heating and cooling process energy efficient (Bär & Vogt 2019). A prime example of a successful conversion to environmental consciousness is the German brewery Hofmühl, which uses renewable energy, sources natural gas from the fermentation of its waste, feeds excess yeast and grain to animals, and bottles 98% of its beer in recyclable packaging (Bishara 2019). Although many single-use aluminum cans are still on display in the beer industry, opportunities for breweries to collaborate and share reusable glass bottles for refills are ubiquitous.

The different aspects relevant to assess the greenness of beverages are endless and difficult to manage, the most used attributes are degree of regionality, disposal and packaging.

## 4.3 German labelling and disposal system

### 4.3.1 Disposable (Einweg)

A study by the Federal Environment Agency (Umweltbundesamt 2016) states that PET non-refillable bottles are the dominant form of packaging for non-alcoholic beverages, accounting for over 50% of the total market share. The reason for this appears to be the trend towards lower prices compared to reusable beverages, as these are predominantly branded products. In addition, the differences between single-use and reusable beverages are not always clear to the consumer, so that the decision between the two variants can be made unconsciously. (Stracke & Homann 2017, 32).

There are several types of disposable beverages, with one type including aluminium cans and other plastic bottles that have no deposit and are marked with the green dot label (Umweltbundesamt 2006), which in Germany means that these bottles are not returned to supermarkets but are to be disposed of in plastic waste. This is the least environmentally friendly way for obvious reasons, as there is no incentive for customers to dispose of them properly despite their individual environmental awareness and these bottles are merely recycled. Glass bottles without a deposit are also not recommended because, although they are usually recycled after being collected in glass containers, their recycling process consumes a large amount of energy (NABU n.d.; Verbraucherzentrale 2020) and similar to cans and plastic bottles, consumers tend to dispose them not necessarily in the correct waste systems or just leave them in the nature.

Another type of disposable beverages are those subject to the deposit system. For disposable bottles and aluminium cans, the government sets a deposit amount of 25 cents, which is returned to the customer at the disposal point in the deposit machines of supermarkets. In return, you receive a credit for the amount of beverages returned, which you can then use to purchase beverages or food, as it is deducted from your total purchase at checkout. Indicators for single-use bottles with deposit are the DPG-label, which shows a can and a plastic bottle with an arrow, PET-Cycle or an EAN barcode (Verbraucherzentrale 2020). The returned non-refillable PET bottles are then pressed into the deposit machine for further use. Only one-third of these bottles will go into the manufacturing process of new bottles. It is more likely that they will end up as films or similar new end products, although there are also opportunities to reuse them as packaging material in the food industry. (Stracke & Homann 2017, 35-37).

Although recycling rates for used PET bottles and beverage cans are generally high, only one third of these recycled materials are actually reused to produce new bottles (Deutsche

Umwelthilfe n.d.). One reason for this are the low oil prices, which result in newer PET being used for bottle production, as they keep prices low and stable compared to the costly recycling process of these materials. Currently, there is a visible trend towards plastic bottles made of up to 100% recycled material, which represents a new niche segment between disposable and reusable bottles. Although some companies claim to have achieved this goal, a closer look reveals that some are still mixing new PET materials into their products (Stracke & Homann 2017, 37), which can lead to demand confidence issues. Plastic bottles advertised as being made from ocean plastic are also a problematic strategy, as research shows that plastic collected from the ocean must be converted back to its crude oil form through chemical recycling, which involves high energy and chemical consumption that the Environmental Protection Agency equates to plastic waste incineration in terms of environmental impact (Initiative Frosch n.d.).

The main advantages of the disposable system are the lower weight, which can lead to energy efficiency during transport, but this is quickly put into perspective as the transport distances are much longer than with reusable systems. In addition, disposable bottle crates are additionally wrapped in plastic for safety during transport, which has a further negative impact on the eco-balance. Another aspect is the lower personnel requirement in the one-way system, which benefits the cost minimization of the companies and ultimately the price development for the customer, but also means that fewer jobs are created. (Stracke & Homann 2017, 38).

#### 4.3.2 Reusable (Mehrweg)

In 2006, Germany was the world leader concerning the frequent use of refillable bottles for beer, mineral water and soft drinks with a market share of 60% (Umweltbundesamt 2006), but the ratio sank to 41,2% in 2018 (Umweltbundesamt 2020), which is controversial as the multi-way bottles are associated with sustainability and high value (Stracke & Homann 2017, 31) and the German youth is directly asking for more variety in environmentally sustainable products as they are dissatisfied with the current availability (PwC 2021). On another note, is the German society quite old, as Late Millennials and Generation Z are only making up for 17% of the total population (Statista 2021) and their attitudes are not reflected in the German beverage market. The research conducted in this thesis aims at discovering whether the decline in refillable bottles is also representative for the German youth or if their purchasing behaviour is just not yet represented in the German beverage market.

The most environmentally friendly beverage product is the PET-multi-use bottle, according to the cooperative of German wells (GDB; NABU n.d.). They can be reused up to 25 times,

which means that one crate with ten bottles of PET-multi-use bottles can replace approximately 250 PET-single-use bottles (Stracke & Homann 2017, 37). Their kindred multi-use bottles out of glass can even be refilled up to 50 times. A basic element to make the refill of those multi-use bottles work are the nationwide pools for multi-use bottles, and the main actor in the background as they receive the bottles from retailers, control, clean and refill them before they get back to the retailers and ultimately to the consumer. To minimize emissions through the transportation between pools and retailers, the market established standardized bottle types, which ensure that those can be transported to the pool within lowest distance to the retailer and thereby also minimizes sorting efforts (Stracke & Homann 2017, 34), which ultimately ensure regionality of the end beverages.

A problematic trend in the returnable beverage market is therefore individualized bottles, which are expected to achieve a market share of 33% within the returnable segment by 2022. The problem with these types of bottles is that they cannot simply be sent to the next bottle pool, resulting in cross-regional transport routes, which in turn increase emissions during transport and complicate the refilling process, as these types of bottles are not used across companies and refill pools must have special equipment to handle the different shapes and sizes. (NABU n.d.) The emergence of individual glass bottles fits with the individualistic characteristics of Generation Z, which also wants to openly display its uniqueness through its purchasing behaviour, but at the same time counteracts the call for more environmentally friendly alternatives and regionality (Scholz & Grotefend 2019, 179).

In 2017, a new packaging law was presented that aims to achieve a higher recycling rate for the various types of packaging. For example, the quota for PET is to increase from 36% to 63% and for the other materials up to 90% by 2022 (BMU 2017). More importantly, this new law requires retailers to label different aisles for single-use and reusable beverages so consumers can make more conscious choices. At first glance, this is a great initiative on the part of lawmakers, but it does not solve the problem that reusable beverages themselves are insufficiently labelled as such (Verbraucherzentrale 2020). While there is the internationally known *Blue Angel* as an indicator of environmental friendliness (Umweltbundesamt 2006; Umweltbundesamt 2014, 39), there is no legally binding labelling for reusable beverages. The new packaging law announced for 2021 (Umweltbundesamt 2021) also does not provide for legally binding labels, which means that each bottle may have a different label which not only contributes to confusion but also to customer frustration as they must search diligently for these terms. Ultimately, the degree of knowledge on those differences between single and multi-use beverages as well as the buying preference will be evaluated with a great interest towards the German Millennials and Generation Z.

## 5 Research methodology and data collection

### 5.1 Research methodology

To be able to answer the research questions presented in the first chapter and thus create a concept for data collection to analyse the purchasing behaviour of Late Millennials and Generation Z in the German non-alcoholic beverage industry, a decision had to be made between a qualitative and quantitative research approach. In the following, the specifics of the two methods are evaluated to explain the decision process for one of the two research approaches.

The main difference between the two methodologies lies in the fact that quantitative data can be quantified as the name suggests whereas qualitative data does not strive for the numerical presentation of a problem. Qualitative research is much more concerned with the aim to understand the roots of a problem and comprehend which dimensions play a key role in the creation of this problem as well as in the solution (Queirós et al. 2017, 370). Mainly, qualitative research is conducted under personal circumstances, whether it is a personal interview, field research by observing the behaviour of people towards the studied problem in their natural environment instead of executing it in a laboratory setting or within a defined focus group (Creswell 2007, 37). This involves interpreting the data streams collected, which is unavoidable and a highly subjective process, as researchers must closely analyse behaviours in different situations and be able to read between the lines when conducting in-depth personal interviews (Winter 2000, 5). For quantitative data, reliability is defined by the possibility of replication, which means that similar results should be obtained when the same research methods are applied to the same sample, whereas the degree of reliability for qualitative data is somewhat more difficult. It is essentially about the correspondence between what a researcher collects as data and what has been observed in the natural environment in relation to the research problem (Cohen et al. 2007, 148f.). In this context, Cohen et al. (2007, 149) provide a vivid example of why reliability is so difficult to achieve in qualitative research as a study conducted at the Nissan car factory in the UK, where work organization was studied under the same conditions, but different researchers analysed the results. While Wickens and Lopez (1987) found a flexible and quality-conscious workforce that placed great emphasis on teamwork, his fellow researchers Garrahan and Stewart (1992) found a work organization that was exploitative and highly controlling.

To summarize, qualitative research tends to be more of an inductive approach, which deals with the aim of deeply understanding a problem in its complexity by getting in direct contact with people, which can not only be time but also money consuming (Creswell 2007, 41).

This approach to research a phenomenon does not strive for generalizability, instead it is an exploratory approach with a less structured theoretical framework as it wants to achieve a holistic overview of the research problem from different perspectives as opposed to quantitative research, which is rather objective and strives for a generalized representativeness for the whole population (Queríos et al. 2017, 370).

Quantitative research approach was defined by Aliaga and Gunderson (2002) as *explaining phenomena by collecting numerical data that are analyzed using mathematically based methods (in particular statistics)* and is the basic understanding followed in this thesis.

In contrast to the qualitative approach, which views reality as something subjective because each person has a different background that influences his or her view of certain phenomena, the quantitative approach identifies reality as something objective. In a way, this view is problematic, as it excludes the existence of different truths about reality and makes it something definite, although the perceived realities are highly relativistic (Sukamolson 2007, 5). Nonetheless, this objectivity is needed to achieve predictions based on identified patterns and a coherent understanding of a phenomenon, which achieves its accuracy through validity and reliability (Sukamolson 2007, 6). Reliability is thereby defined as the extent of replicability, so basically when the same research process is repeated identically, it yields the same results and validity is described as the extent of concordance between the intention the researcher has with the result of the research process and if exactly those results are achieved (Winter 2000, 9; Watson 2015, 45). Since there is a whole range of theories on green consumption, the aim of this thesis is to test hypotheses and either verify them or analyse results that refute the tested hypotheses, which examine the interrelationship between attitudes and behaviour. In doing so, the research methodology will be hypothetico-deductive. As the goal of this thesis is to identify and quantify the motivators of green purchasing behaviour and to segment the younger generation as environmentally conscious consumers according to their attitudes and behaviours on this issue, a logical approach with controlled measurements is most appropriate (Sukamolson 2007, 9).

Since the research will be conducted within a thesis, in a short period of time, quantitative data can definitely be preferred as a much larger sample group can be contacted through open accessible surveys (Cohen et al. 2007, 226). In contrast, a qualitative approach would increase the time needed enormously, because interviewees would need to be met in person under defined circumstances (Creswell 2007, 40), or the sample size would have to be very narrow, which would be counterproductive and not suitable for drawing general conclusions and identifying patterns. The larger the sample size, the more likely the numerical data collected (Muijs 2004, 2) will be meaningful in terms of concrete hypothesis testing.

## 5.2 Sampling method and data collection

The sampling method for this survey conduction is a probability-based sampling method, which describes a procedure with which respondents are selected or addressed as members of the frame population according to some sort of inclusion criteria. Here, the study population (Delice 2010, 2012) would be defined as German citizens, which were born between 1990 and 2005 as those already have some monetary power, as young people can already have a job from the age of 16. Thus, to a certain extent, they can decide for themselves whether they buy green beverages or whether they only pay attention to the affordability of their drinks.

This described probability-based sampling can be further defined as stratified sampling, as the German population was combined into a homogeneous group with the inclusion criterion of year of birth, as it represents a generational cohort with similar views, opinions, and probably similar access to the internet as digital natives. After this pre-selection of respondents, simple random sampling was conducted, as anyone within this age group could participate, regardless of their education level, employment, income, or other variables. The only bias in the survey was created by the inclusion of snowballing to exponentially increase the reach and target population. Since the questionnaire was distributed primarily among college students, there is a high likelihood that primarily students participated in the survey, which was distributed through various social media channels and domains. This, of course, meant that people who do not follow these online domains did not have the opportunity to participate in the survey. (Fricker 2008, 199; Etikan & Bala 2017.)

The data collection method, which was chosen from the quantitative methodology sphere is the conduction of a survey. Besides this mode, there were five other quantitative research methods available like field experiments, simulations, correlation studies and multivariate analysis. Surveys are thereby by far the most used and common method to collect numerical data, directly followed by correlation studies. Based on the theoretical background and built hypotheses, the researcher hereby formulates questions which describe certain opinions, point of views or behaviours and the target group must state to which degree the transcribed statements reflect their own said behaviour. (Queríos et al. 2007, 381.)

Since numerical data is collected, it provides the researcher with descriptive information, which enables to ascertain correlation between different variables and thereby supports or refuses hypotheses, which complies with the desired research outcome of this thesis (Cohen et al. 2007, 197). Furthermore, is the use of a survey cost-effective, allows to easily collect data from a wide audience and achieves high representativeness using statistical

analysis methods (Queríos et al. 2007, 382). The surveys were sent out as self-completion questionnaires via web-based applications as LinkedIn, WhatsApp, Signal, and Instagram, as Cohen et al. (2007, 226) state that internet-based surveys reach potentially a higher number of participants and is therefore advisable to take full advantage of the benefits of a survey conduction. Furthermore, the selected target group being the cohort of Late Millennials and Generation Z are true digital natives, which emphasizes the usefulness of this particular survey type.

The survey was designed and distributed via the LimeSurvey platform, which is commonly used at the Saarbrücken University of Applied Sciences and is suitable for collecting the numerical data sets. To ensure high reliability, the minimum number of participants was set at 100 to be able to detect significances. Subsequently, the collected data will then be transferred into the statistical package for the social sciences, SPSS for short. Ensuring that participants answered the survey attentively and read the full statements, an attention task was included in which the audience had to click on a specific box instructed in the statement.

## 6 Questionnaire measurements

### 6.1 Questionnaire structure

The questionnaire was offered for completion in the world language English and in the national language German. It comprised five different sections, starting with demographic information, then asking about cohort-typical psychographic characteristics such as the degree of risk aversion. In the third section, variables from the theory of planned behaviour were queried, and in the fourth section, the respondents' level of knowledge about the German beverage industry was tested. Lastly, actual green behaviour was queried using statements that respondents were asked to rank according to frequency performed. A total of 60 questions were asked in the survey, which took approximately 15 minutes to answer.

### 6.2 Demographic variables

As previous research (Chen & Chai 2010; Kirgiz 2016; Rodríguez-Priego & Montoro-Ríos 2017; Naderi & Van Steenburg 2018; Topić & Mitchell 2019) has shown, variables such as education, gender, age and income have a restricted and varying significance, although studies with Millennials found them to be strong indicators of psychographics, which has exploratory value for Generation Z. The demographic variables studied in this survey therefore include gender, the birth year to ensure the desired target group is reached, their primary residence and in which federal state they live, educational level, the current position of employment, housing situation as well as the monthly expenditure on groceries.

### 6.3 Psychographic variables

The psychographic variables were borrowed from the self-administered questionnaire by Naderi & Van Steenburg (2018), which used the four variables selfless altruism, frugality, future time orientation and risk averseness to assert the green consumption behaviour of young Millennials, referred to as people born between 1988 and 2000. Those characteristics are valid for this survey due behavioural similarities between Gen Z and Late Millennials.

**Selfless-Altruism** was measured on a semantic differential scale with five items, which range from 1 (never) to 5 (very often). The utilized items were adapted from the Self-Report Altruism Scale (SRAS; Rushton et al. 1981, 297) and included items such as *I have donated goods, clothes, or money to a charity*, *I have let someone borrow an item of same value to me* and *I have allowed someone to go ahead of me in a line-up (e.g., in the supermarket)*. This measurement scale was used because it captures the immediate tendency to engage in altruistic behaviour rather than testing mere attitudes towards altruism.

**Frugality**, defined as *careful use of resources and avoidance of waste* (DeYoung 1985, 284) was measured by five statements on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The used items were adapted from the Frugality scales of DeYoung (1985, 286) and Lastovicka et al. (1999, 89) and included statements such as *I am proactively searching for ways to avoid waste in my daily life* as well as *Making better use of my personal resources makes me feel good*.

**Future time orientation** was similar to Frugality measured by five statements on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The elements used were borrowed from the Zimbardo Time Perspective Inventory Items (Zimbardo & Boyd 1999, 51f.) and include items such as *I am able to resist temptations when I know there is work to be done*, *Since whatever will be will be, it does not really matter what I do* and *When I want to achieve something, I set goals and consider specific means for reaching those goals*. This scale was used because the statements target more individualistic character traits typical of German society and indicate whether people view their behaviour as something that can change the future or whether it is independent of future outcomes.

Lastly, **Risk aversion** was measured on the benchmarked four-item risk averseness scale, which was introduced by Burton et al. (1998). Because previous research has had an interest in changing the measures to show whether the importance of risk aversion is altering in relation to green consumer behaviour (Naderi & Van Steenburg 2018, 20), two of four items were replaced with new statements from Zinkhan & Pan's (2006) risk aversion scale. These statements included *When there is a great chance of reward, I take high risks* and *To achieve something in life, one must take risks*, which had to be rated from 1 (strongly disagree) to 5 (strongly agree) to indicate the extent of individual risk aversion.

#### 6.4 Theory of planned behaviour variables

Within the scope of the theory of planned behaviour (Ajzen 1991), the variables attitude, subjective norm, purchase intention and perceived behavioural control were utilized, and statements were individually formed according to literature.

The first variable, **attitude**, was measured by combining the five-item scale of environmental concern, taken from Kilbourne and Pickett (2008) with the three-item attitude scale as used by Paul et al. (2016) and adapting the statements to the frame of this thesis. The result was a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) and including statements like *I have a favourable attitude toward purchasing green versions of a product* and *Purchasing green is necessary to personally contribute to positive change*.

**Subjective norms** were measured by five statements on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Three of the five items were adapted from the modified scales of Muralidharan & Xue (2016, 232), including *I talk to my family and peers about buying green beverage products*. The remaining two statements were developed on the basis that young consumers appear to be more influenced by their immediate acquaintances and therefore question trust in mass media communications.

The **purchase intention** followed the prior two procedures and was measured by five statements on a five-point Likert scale, which ranges from 1 (strongly disagree) to 5 (strongly agree). It was adapted from the purchase intention scale by Paul et al. (2016) towards green beverage products and features statements like *I will try to buy beverages that can be recycled or refilled*.

Finally, **perceived behavioural control** was measured by five statements on a five-point Likert scale, extending from 1 (strongly disagree) to 5 (strongly agree) and was adjusted from the seven-point perceived behavioural control scale from Paul et al. (2016) with statements like *I believe that I have the ability to purchase green beverages*.

## 6.5 Beverage labelling knowledge

In the German beverage industry, there are certain labels that indicate how the bottles are disposed of, how much deposit you get back when you return the bottles to the collection points in supermarkets and make assumptions about the degree of negative impact on the environment. Respectively three statements have been designed for the *Einweg* labelling as well as *Mehrweg* labelling based on information derived from the German consumer advice centre (Verbraucherzentrale 2020). The level of consumer knowledge and indirectly the B2C information stream within the beverage industry will be evaluated based on the responses of the survey participants. They must state whether the statements are true or false by ticking one of the two boxes for each item.

## 6.6 Green purchase behaviour variables

In the last section of the survey, environmentally conscious purchase behaviour was measured with 10 different items and one attention control item to make sure that the participants read the statements fully. The 11 items were quantified in a five-point semantic differential scale, evaluating the frequency of said behaviour from 1 (never) to 5 (almost always) by adapting the scales from Stern et al. (1999), Roberts (1996) as well as Straughan & Roberts (1999) according to the green beverage industry environment, resulting in items such as *When there is a choice, I choose the beverage with the highest regionality*.

## 7 Data Analysis

### 7.1 Exclusion criteria and statistical procedure

The survey was active for one week, from 17 November 2021 to 24 November 2021, and was distributed through social media channels. Within this one week, 185 people participated in the questionnaire via LimeSurvey, which then had to be filtered according to some questions asked in the survey. 2 participants had to be excluded from the data sample because they were born before 1990 and therefore did not fall within the generational frame. Additionally, 2 responses had to be deleted from participants who indicated that their primary residence was not in Germany, as this is one of the requirements for evaluating the German beverage industry and disposal system. Finally, the responses of 10 participants had to be excluded from the sample because they answered the aforementioned attention question incorrectly, indicating that they did not read and answer all the questions in the questionnaire carefully and conscientiously. This left a total of 171 complete responses.

The data set of these 171 responses was then transferred to the statistical package for social sciences, SPSS for short. There, the data were sifted and checked to ensure that the answers were transferred without errors and that the variables had the correct designation and were additionally labelled, if necessary. Descriptive analysis was then begun by evaluating the absolute frequencies of the individual questions and graphing them with appropriate charts. This provided an overview of initial response and opinion trends, which were then evaluated in a next step using the statistically relevant t-test.

With t-tests, correlations between different variables and statements or even entire constructs can be identified and further evaluated, as this procedure compares mean values considering two-sided significance or the p-value and thus offers the possibility of drawing conclusions from these analyses. Intercorrelations are acceptable and valid when the p-value is less than 0.05 or even 0.001 to prove an even higher significance. Both scenarios ensure that the error rate is low and that the null hypothesis can be rejected.

To analyse the reliability or validity of entire constructs, an exploratory factor analysis must be performed before the t-test. This procedure checks whether the individual variables, which in their entirety are supposed to result in a construct, load on the same factor and can thus be regarded as one concept. These factor loadings should not be less than 0.5 and in the best case even 0.7 or higher. The variance, which is also analysed in this way, should not be less than 0.5 or 50%. The internal consistency of these constructs, or the inter-item correlation, is then analysed using Cronbach's alpha, which should take a value above 0.7 to be statistically acceptable and requires to code all items in the same direction.

## 7.2 Demographic sample overview

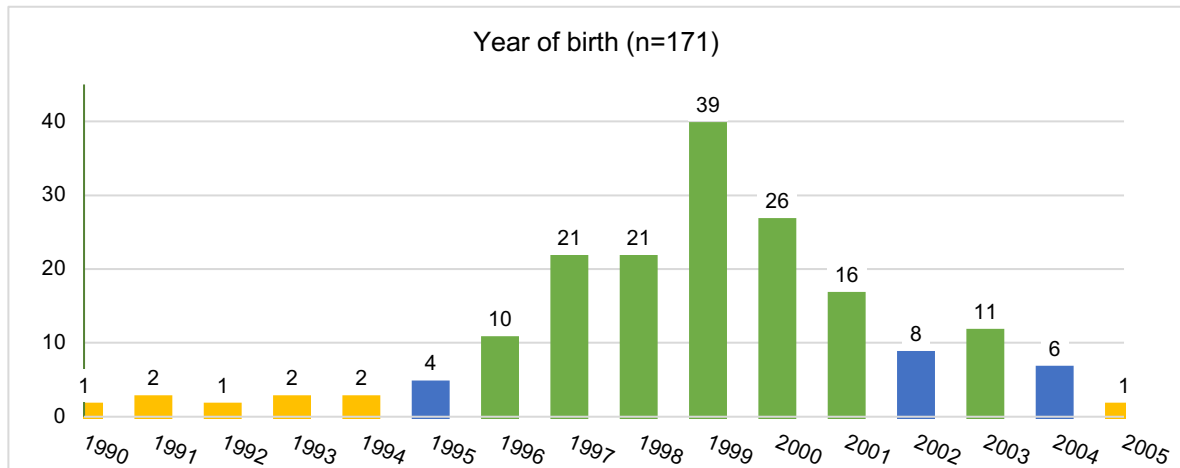


Figure 7: Birth year distribution

As the target group was set by the birth years between 1990 and 2005, the participants had to clarify in which year they were born to guarantee that they belong to the said target group and are therefore relevant for further research. Thus, two responses were deleted from the database because one indicated their birth year as 1989 and another as 1984.

Figure 7 shows that most answers were accumulated from respondents between the birth years 1996 and 2001 including 2003, representing 144 participants or 84% of the total number. Only 4.7% were born in 2002, 3.5% were born in 2004 and 2.3% in 1995, directly followed by 9 participants, who were either born in 2005 (1; 0,6%) or between 1990 and 1994 (8; 4,8%), representing those who were the most difficult to reach as they form the marginal group of respondents included in this thesis' survey.

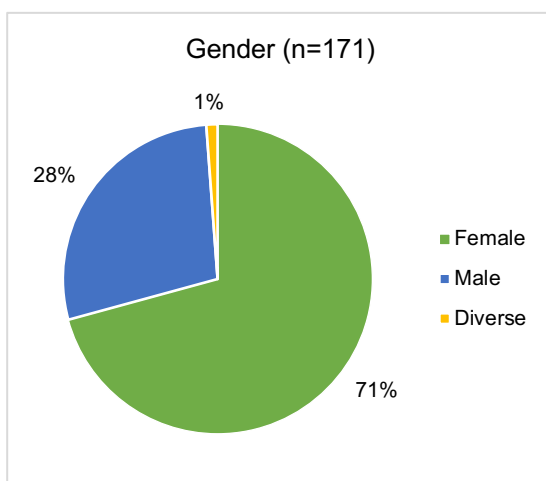


Figure 8: Gender distribution

To receive a basic overview of the respondents, one of the sample questions also included a question about gender.

Of the 171 total answers, 121 respondents indicated that they identified with the female gender, while 48 identified with the male gender and 2 as diverse with no further specification. As the vast majority (71%) identified

themselves as female, further significance testing based on gender as a distinguishing variable must be carefully treated and analysed since the gender distribution varies so much and cannot be divided into equal parts between the here presented three gender identities.

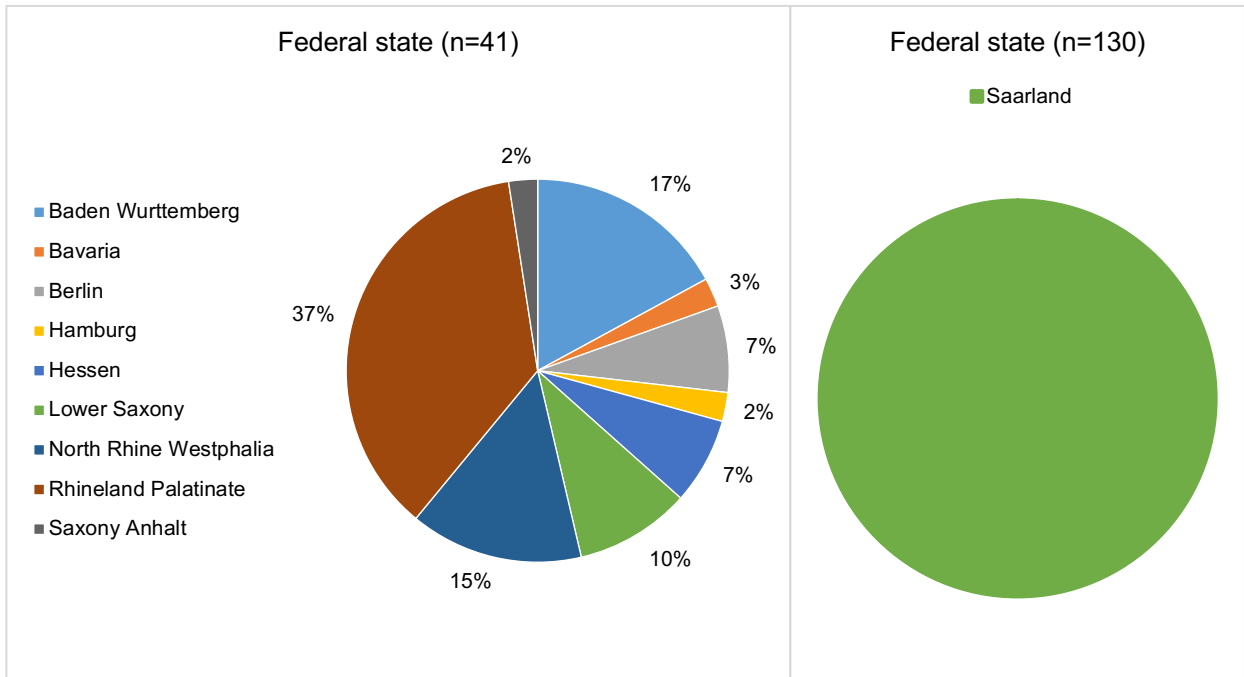


Figure 9a/b: Federal state distribution according to primary residence (n=171)

To ensure that the survey was solely answered by German citizens, who have their primary residence in Germany and are therefore enabled to be participants in a survey about the German non-alcoholic beverage industry. There were only two, who stated that their primary residence is not Germany, which was the reason for their elimination from the database.

The 171 respondents presented stated that Germany is their primary residence. To argue from which parts of Germany the respondents came as a target group overview, the participants had to state in which federal state they lived in. Thereby the vast majority of 130 citizens, namely 76% of the target group stated that they live in the federal state Saarland, which was the expected research bias. The remaining 41 respondents live in Baden Wurttemberg (7; 4,1%), Bavaria (1; 0,6%), Berlin (3; 1,8%), Hamburg (1; 0,6%), Hessen (3; 1,8%), Lower Saxony (4; 2,3%), North Rhine Westphalia (6; 3,5%), Rhineland Palatinate (6; 3,5%) and Saxony Anhalt (1; 0,6%). No one could be reached from the federal states Brandenburg, Saxony, Thuringia, West Pomerania, Schleswig-Holstein and Bremen.

As the German non-alcoholic beverage industry is identical across Germany, in terms of the disposal system and regulations, it was not relevant for this thesis to reach an equal number of participants across Germany, although this would have been the optimal case for significance testing on that behalf. But, as only some beverage brands may differ across federal states and the location of respondents can therefore be viewed as of little explanatory power, the bilateral significance testing did not result in significant results ( $p < 0.05$ ) when comparing respondents from Saarland and respondents from the other federal states.

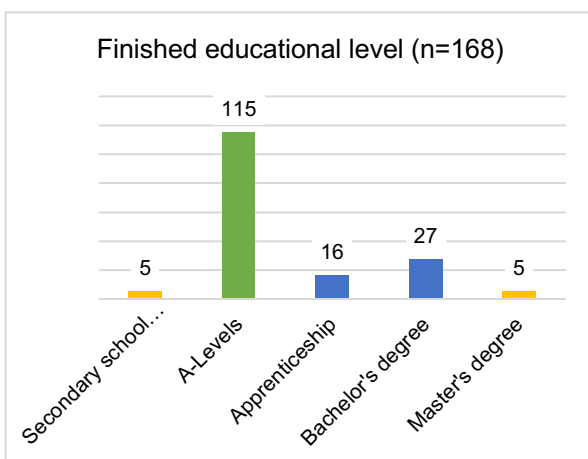


Figure 10: Education distribution

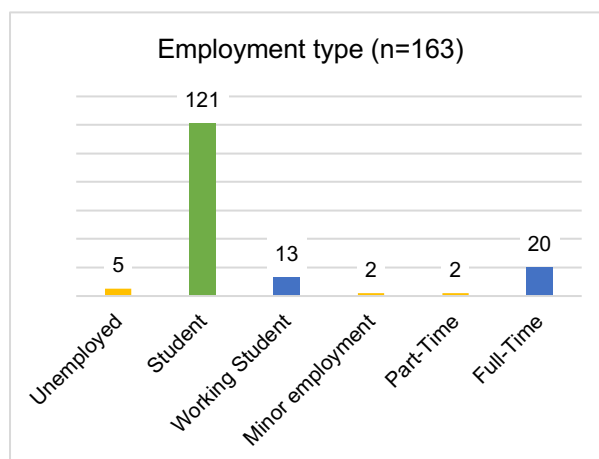


Figure 11: Employment distribution

The vast majority of respondents (115; 67%) have already graduated from high school. This can be explained by the distribution of employment, as 121 respondents (71%) indicated that their current main occupation is being a student, which indicates that most of the participants in the survey are currently aiming for their next higher educational qualification.

The second and third most educational levels are apprenticeships (16; 9%) and bachelor's degree (27; 16%), followed by the secondary school certificate (5; 3%) and master's degree (5; 3%). None of the surveyed citizens owned a PhD or higher form of education. Regarding employment, only 5% (9) were either unemployed, pursuing a mini job or working part-time, whereas 13 (8%) identify as working students and 20 (12%) are working full-time already.

The accumulated data does not display the whole target group of 171 participants as some preferred not to answer the question about education and/ or employment. In addition, similar to the state distribution, significance testing for education and employment levels must be done carefully because respondents cannot be divided into equal groups for comparison.

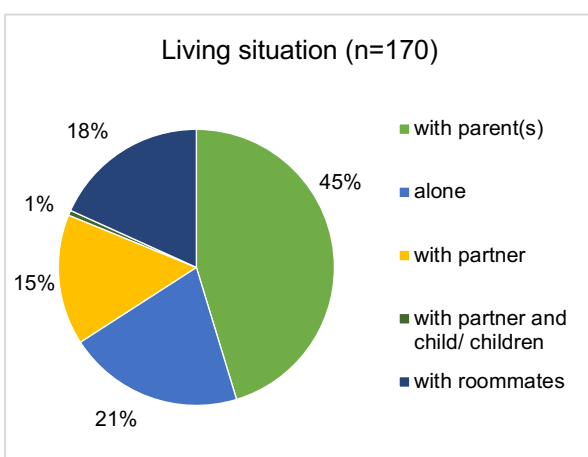


Figure 12: Living situation distribution

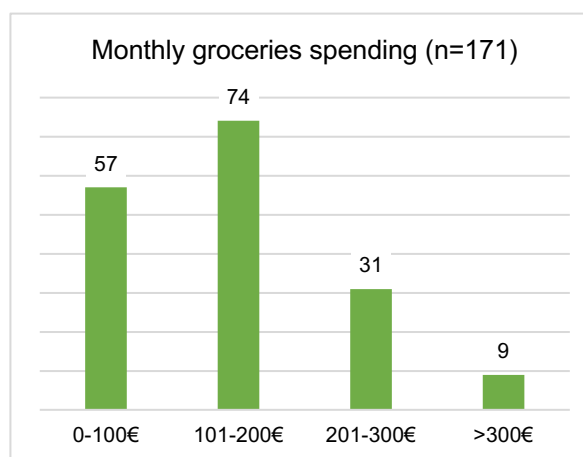


Figure 13: Grocery expenditure distribution

Overall, most of the participants (77; 45%) still live with one or both of their parents in one household, which could be expected as most of the participant's type of employment is being a student. This is directly followed by 35 (21%) respondents living by themselves, 31 (18%) living in a shared accommodation with roommates and 26 (15%) participants living with their partner. Only one person (1%) already lives with their partner and a child or children in one household, whereas another one preferred to not answer this question.

Of particular interest in terms of purchasing behaviour was the approximate monthly expenditure on groceries for each individual. Although most respondents are identifiable as students and a great amount still lives at home with their parents, the predominant monthly spending amounts to 101-200€, stated by 74 (43%) of survey participants. A third (57) spends between 0€ and 100€ per month on groceries, and 31 (18%) spend between 201€ and 300€ on it. Only 9 (5%) respondents spend more than 300€.

In fact, a significance could be found between these two variables. Neither educational level nor employment type has shown any significance on the monthly expenditure on groceries, but the bilateral significance of  $p < 0.05$  shows a significant link between living situation and monthly grocery spending. Thereby, people living with partner, roommates or children tend to pay more for groceries than people who live alone or with their parents, but the latter tend to invest between 101€ and 200€ on their monthly grocery expenditures.

### 7.3 Descriptive analysis and interrelations

In this chapter, the frequencies of answers and thus also tendencies of attitudes, knowledge or behaviour of the target group are presented. This provides an initial overview of the individual constructs before they are subsequently checked for intercorrelations and thus also hypotheses.

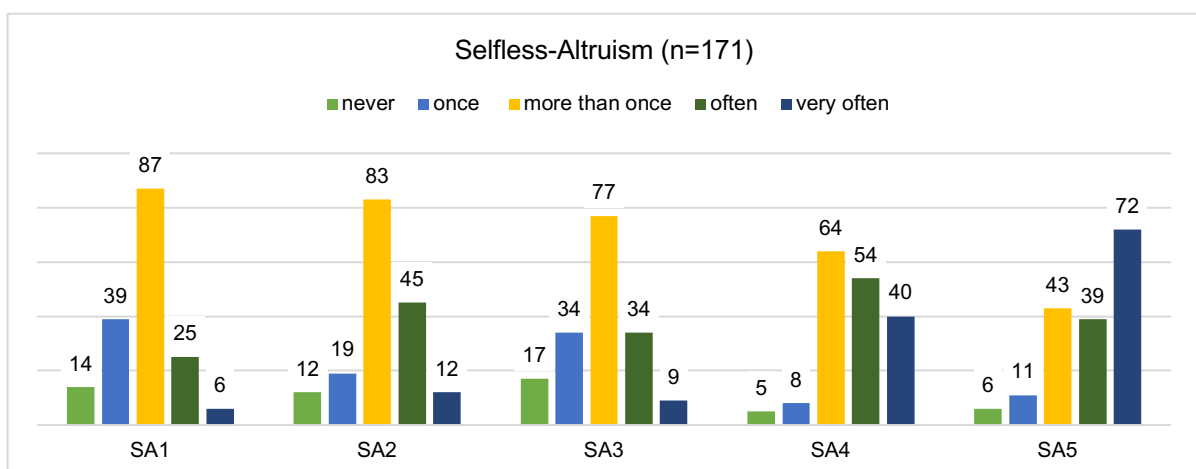


Figure 14: Degree of selfless-altruistic attitude

The target group answered the least on low participation of selfless-altruistic behaviour with only 24% selecting *never* or *once* as their participation frequency. This suggests that German Late Millennials and Gen Z are considering other people in addition to their immediate family or friends and engage in selfless actions accordingly. However, as the mean value of this psychographic variable is 3.3, this indicates that those actions are very much dependent on the situation and personal beliefs, as they have not consistently integrated altruistic attitudes into their daily life, which is in line with previous research findings.

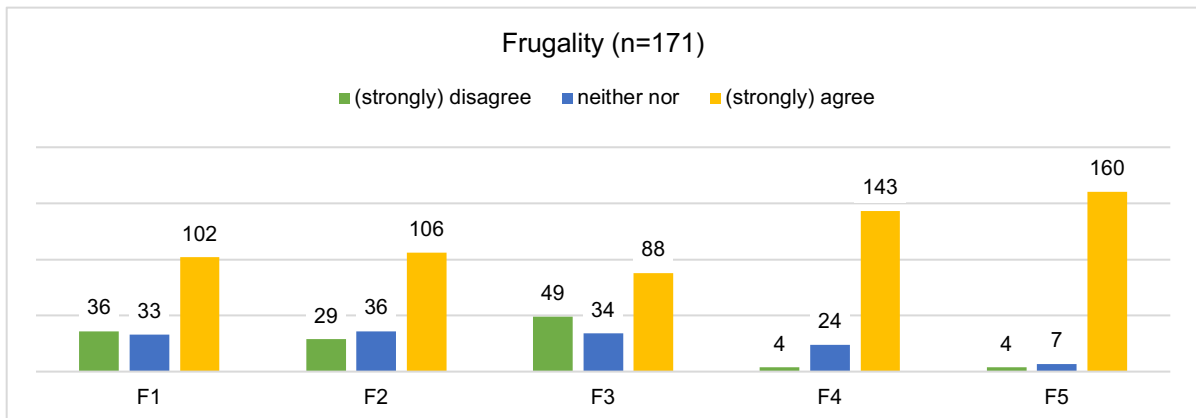


Figure 15: Degree of frugal attitude

Overall, the respondents have shown a significantly higher level of participation in frugal attitudes than in altruistic attitudes, as the mean value of frugality is 3.8, indicating that most of the Late Millennials and Gen Z agree to frugal behaviour and the will to let their money go further and save in the long run by taking good care of their belongings. 60% state (strongly) agree that they proactively try to find ways to avoid waste in their daily life and 84% (strongly) agree that it actually makes them feel good to make better use of their personal resources, which can be seen as indicators for participation in green behaviour.

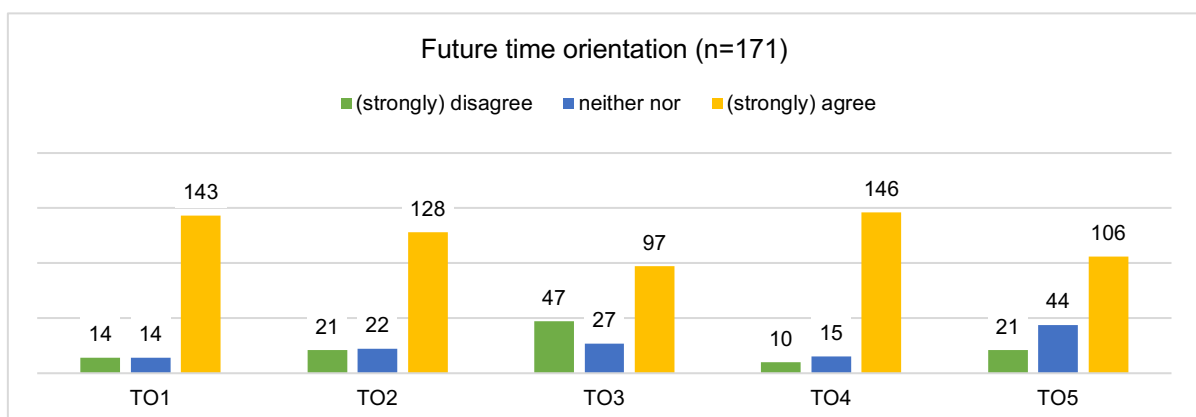


Figure 16: Degree of future time oriented attitude

Within the questionnaire the statements TO2, TO4 and TO5 were negatively worded, so for better understanding of the attitude of the target group they got reverse-coded so that all statements deliver a coherent direction of future time orientation. In line with the German stereotype, German Late Millennials and Gen Z are also very much future-oriented with a mean value of 3.8, as between 57% and 85% of all respondents agreed (strongly) with the idea that their current behaviour can definitely impact future outcomes, and they do not comply with the idea that there would be no point in worrying about the future as it is not affected by an individual's behaviour, on the contrary. This may also lead to a higher green attitude and possibly behaviour.

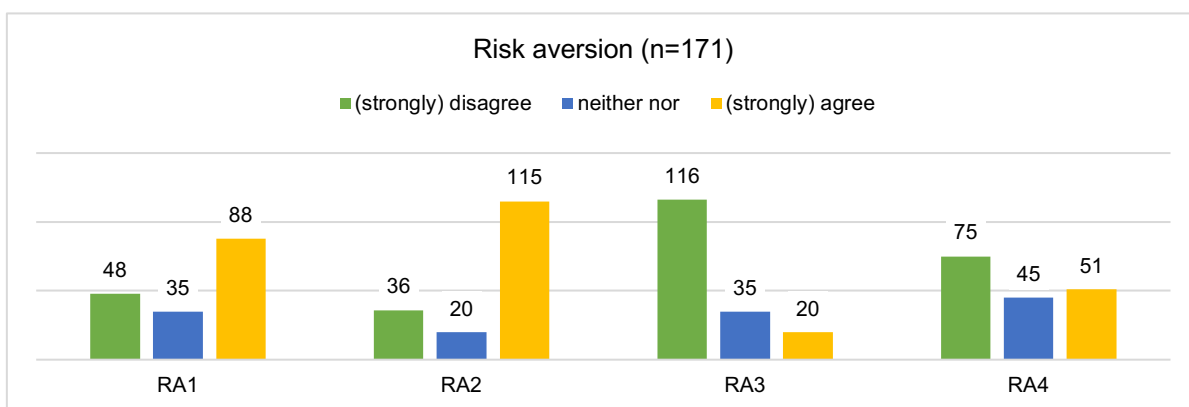


Figure 17: Degree of risk-averse attitude

Similar to the future time orientation construct, the two of the four statements about risk aversion were also expressed the other way around, which why for analytical and illustrative purposes, they were reverse-coded. Although the German culture describes a strong uncertainty avoidance, the questioned Late Millennials and Gen Z are with a mean value of 3.0 not necessarily risk avoidant nor risk seeking. The slim majority with 52% states that they have no desire to take unnecessary chances on things, but 68% realizes that there is a certain degree of necessity to take risks in life to pursue achievements and be successful in life. Particularly interesting was that there is a high statistical significance ( $p < 0.001$ ) that those respondents, who do not like to take risks, are also not willing to indulge in high risks if there is a great chance of reward. So, even if the result of risk taking is connected to some sort of safe winnings those people are still showing uncertainty avoidant attitudes.

Overall, German Late Millennials tend to exhibit selfless behaviour when they do not have to go out of their way to help strangers, but they can easily incorporate this attitude in their daily tasks such as holding a door open. Since they do not execute said behaviour frequently, German youth are very much in line with the individualistic stereotype in Germany. In addition, they show a fairly strong tendency to be frugal and future time-oriented, preferring to avoid risky behaviour, but are aware that uncertainty is to a large extent part of life.

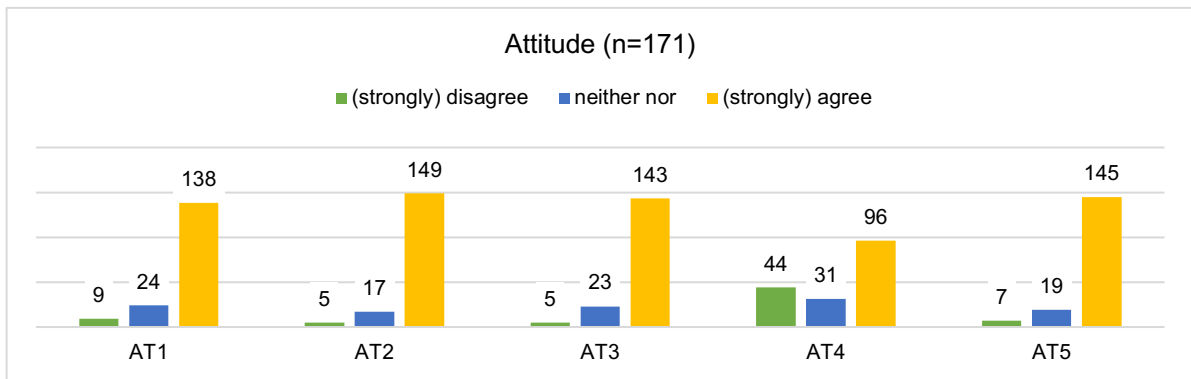


Figure 18: Degree of environmental attitude

Within this construct, there was only the statement AT4 negatively phrased, which was therefore reverse coded to align all five statements in one direction. 51% of the respondents agreed that they are very concerned about the environment whereas 30% even expressed a strong agreement with this concern. The vast majority of German Late Millennials and Gen Z also agrees that green purchases are necessary for positive change contribution, and they hold a positive attitude towards products which are labelled as green. With a mean value of 4.0, they inherit a positive environmental attitude and 85% agree that anti-pollution laws should be enforced more strongly, which are within the beverage industry in the current state rather recommendations than controlling measures. Interesting is that one fourth of respondents think that their individual buying behaviour can contribute only very little to the problem solvation, although 85% hold a favourable attitude towards green purchases and 87% see green purchases even as a necessity for positive developments.

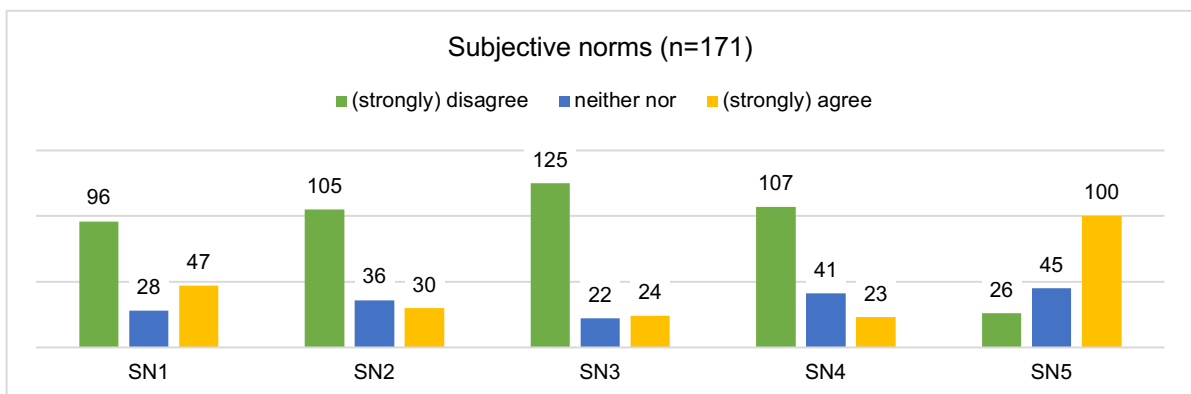


Figure 19: Degree of engagement with individual's subjective norms

The results on subjective norms are particularly interesting, because although 58.5% of respondents state that they trust purchasing advice of their peers and family more than mass media, they do not tend to actively seek advice or even talk to their peers and family about green beverage purchases. Between 72% and 86% of the total survey participants

indicated that they do not have conversations with their immediate circle about green beverages, which could stem from unawareness about the importance of the topic or the unconscious participation in purchase behaviour. The former could be supported with the answers from the fourth statement as 63% clearly state that they perceive the mass media communication about ecological beverages as not trustworthy or not comprehensible. Actually, those who clearly stated that they do not trust mass media communication have a significantly ( $p < 0.001$ ) lower engagement with their family and peers about green purchases within the beverage industry with a mean value of 2.3, although they tend to fundamentally trust their close circle more in terms of purchasing advice than mass media communication.

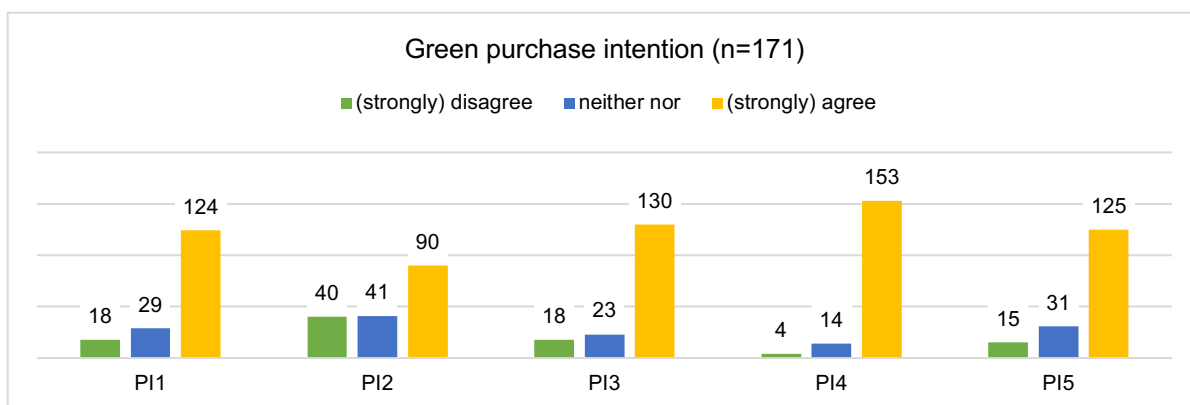


Figure 20: Degree of green purchase intention

The participants evaluated their purchase intentions towards green beverages with a mean value of 3.8 which indicates that they have high intentions of buying ecologically sound beverages. With 89%, the majority of respondents state that they are intentionally willing to try and buy beverages, which can be refilled or recycled, whereas only 53% state they are willing to spend more on environmentally friendly than conventional beverages. linked to the (strong) agreement of 76% of participants to the third statement that they would be willing to spend more on green beverages if the benefits were communicated more transparently. In fact, those who stated that they (strongly) agree with spending more money on ecological beverages than conventional ones, would be significantly ( $p < 0.001$ ) willing to spend more money on green beverages if the benefits were communicated more transparently and definitely want to purchase green beverages in the future, while those who indicated that they tend not to plan to spend more money on green beverages would also not be willing to spend more money even if the benefits were communicated more transparently. However, these were then significantly ( $p < 0.001$ ) more willing to try and buy recycled or refilled beverages instead of conventional ones. In addition, 124 participants (72%) are considering switching to green beverages in the future for ecological reasons, minimizing the negative impact of their grocery shopping behaviour on the environment.

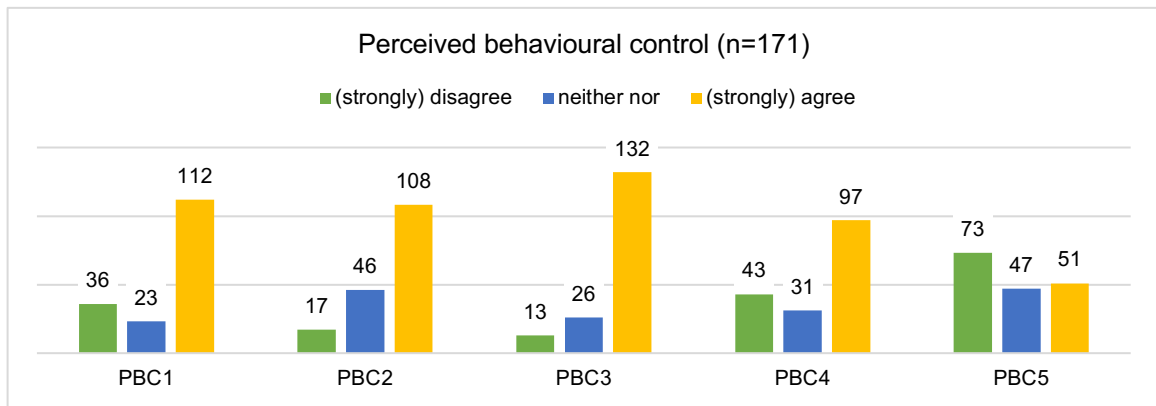


Figure 21: Degree of perceived behavioural control

The perceived behavioural control created a mean value of 3.6, whereby the last statement was negatively worded and for illustrative purpose reverse coded. More than two-thirds of all participants believe they have the ability to purchase green beverages (65%), are confident they would purchase green beverages if given the choice (63%), and acknowledge they have the capability to pursue this purchasing behaviour in the future (78%). A slight majority (57%) agree that they have the resources, time, and willingness to purchase ecological beverages, which has a highly significant ( $p < 0.001$ ) positive impact on the other variables, with the exception of PBC5, where attitudes are significantly ( $p = 0.007$ ) balanced.

Interestingly, those who believe that purchasing green beverages is rather not totally within their control (43%) have a neutral opinion about their ability to purchase green beverages, whereas those who believe that they in fact are in full control about their purchasing behaviour significantly ( $p = 0.007$ ) admit to their green purchase ability. The respondents thus tend to perceive their purchasing behaviour as something they rather can control themselves, than something that is exclusively linked to external circumstances and offers.

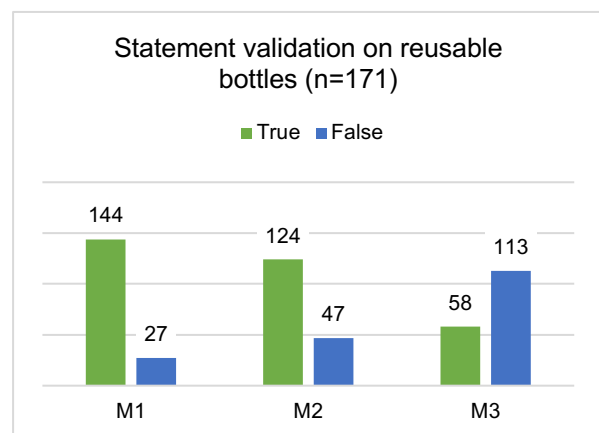
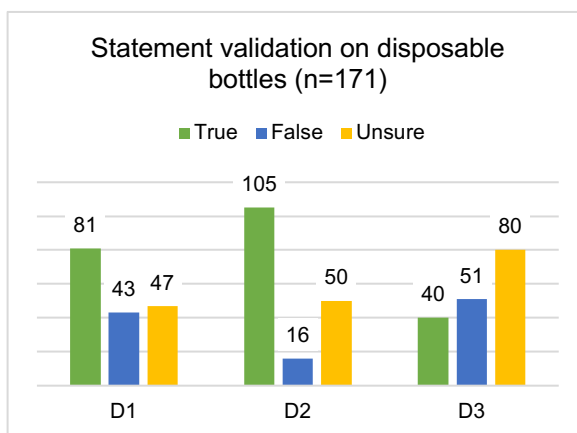


Figure 22: Disposable knowledge distribution    Figure 23: Reusable knowledge distribution

In this section, the participants were asked about their knowledge of the disposal system in Germany, both in relation to single-use bottles and reusable bottles. In the first round, respondents were asked to state whether they considered the statements to be true, false or whether they were unsure about the correct answer, whereas in the second section, they were only given the option true or false to validate the statements. This was done to familiarize the respondents with the task procedure and to see how they would evaluate the statements if they had to decide definitively whether the statements were true or false.

When asked about the disposable bottles, between 28% and 47% of the respondents were unsure about the correct answer, and most of them who decided on a definite answer, answered incorrectly. Only 35% answered the first statement correctly with false, surprisingly 87% decided correctly on the second statement to be true and 44% correctly supported the statement of disposable bottles to have a bad ecological balance. Those who evaluated the first statement correctly, significantly ( $p=0.001$ ) decided correctly on the second statement, but no matter if they got the first two statements correct or not, people tend to evaluate the ecological balance of single-use bottles incorrectly, which could be a sign for communication inconsistency in the beverage industry from companies to the consumer.

Regarding the disposal of reusable bottles, 84% correctly evaluated the first statement to be true, while only 28% knew that there are no legally binding labels for marking reusable bottles and 66% correctly stated that the last statement was incorrect as the deposit for reusable bottles at 15 cents is cheaper than for disposable bottles at 25 cents. It was found that the ones, who evaluated the first statement as true (and therefore correctly), answered the pledge statement correctly as well ( $p=0.032<0.05$ ). Otherwise, no significance was found for how evaluation tendency might have changed by removing the option to select *unsure*, suggesting that participants responded based on their actual knowledge level or gut feeling rather than blindly substituting the reduced option with one of the other options.

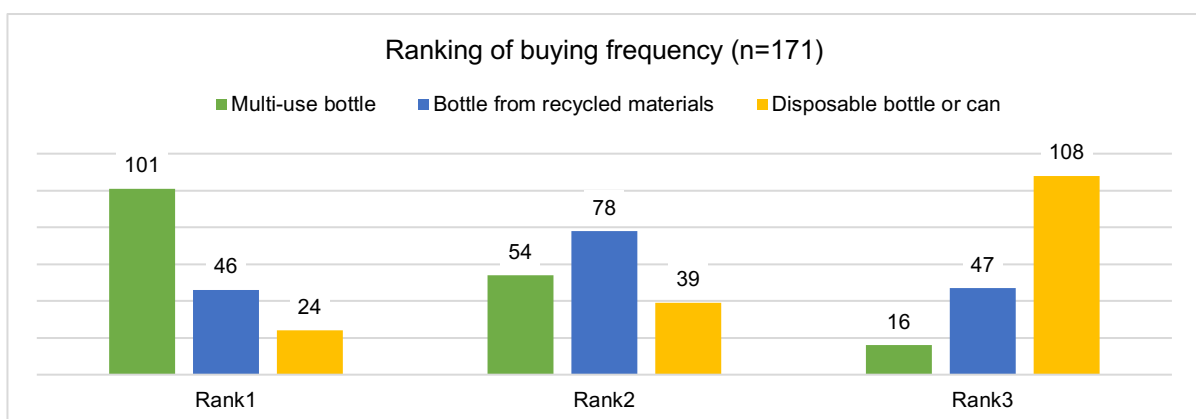


Figure 24: Distribution of buying frequency of the three beverage types presented

The survey participants were given short descriptions of the three different beverage types ranging from single-use bottles or cans to bottles made from recycled material to reusable bottles and asked to rank them according to how often they were purchased.

Almost two-thirds of respondents (59%) put reusable bottles first, meaning that they are most likely to buy reusable bottles based on their past purchasing behaviour, followed by 27% who are most likely to buy recycled bottles and only 14% who state they most often buy single-use bottles or cans.

Second place is split fairly evenly among the three beverage types, with most respondents (46%) saying they buy bottles made from recycled material second most often, followed by one-third (31%) naming reusable bottles and 23% putting single-use bottles second.

Lastly, the third place is similar divided as the first one: 63% indicate they purchase single use bottles the least often, followed by 28% who mention bottles made of recycled material as the least often purchased beverage and only 10% citing multi-use bottles. Interestingly, a highly significant relationship ( $p=0.004<0.05$ ) was found between PBC2 and the third ranking position. Namely, those who indicated they would buy green beverages if it were only up to them significantly ranked single-use bottles and cans third as the types of beverages they consume least. This result is consistent with previous observations, where respondents indicated that they are more likely to try to purchase beverages that can be re-filled or recycled than to choose green beverages exclusively.

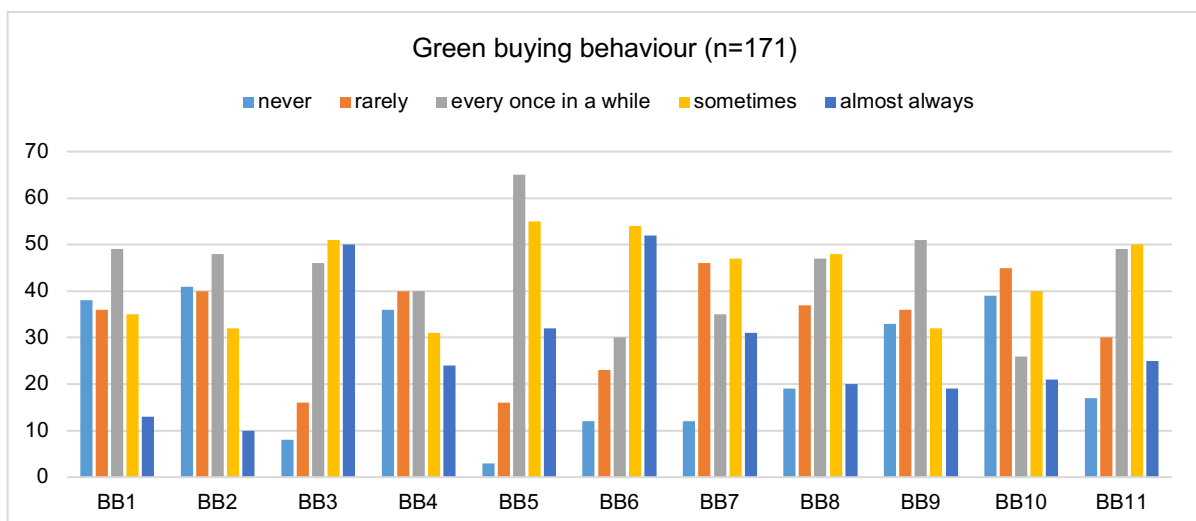


Figure 25: Frequency of green buying behaviour

Overall, respondents in this survey demonstrated a medium frequency of green purchasing behaviour, as the mean score of this construct was 3.1, indicating irregular purchasing behaviour and occasional (*every once in a while*) participation in green purchases.

Although the generation of Late Millennials and Gen Z is considered to be very opinionated and environmentally conscious, only 8% of respondents would almost always boycott the purchase of beverages from a company that harms the environment. 20% say they would sometimes avoid beverages from these companies and 29% do so occasionally, whereas 43% never or rarely avoid beverages of environmentally harmful companies, which does not compare to the omnipresent movements such as Fridays for Future, which are primarily led by exactly this generation.

Nearly one third (30%) of respondents stated that they would (have to) make an extra effort and drive to certain supermarkets to purchase green beverages and 25% actually engage in additional efforts to seek out ecological beverages for consumption. Nonetheless there was no significant relationship found between those two observations and the vast majority with 70-75% is not actively making efforts to find green beverages among others.

Although most of the respondents do not actively search for green beverages, if they are given the choice, 86% are occasionally to almost always choosing the beverages which has the least dreadful impact on the environment. 56% who are switching beverages for ecological reasons are with a high significance ( $p < 0.001$ ) sometimes choosing less environmentally harmful beverages and those who rarely to never switch products for ecological reasons are nonetheless occasionally choosing less harmful beverages.

Half of the survey participants (51%) indicated that they are sometimes to almost always stopping themselves from purchasing a certain beverage whenever they understand the dreadful impact it has on the environment. Those 87 respondents are then also highly significantly ( $p < 0.001$ ) sometimes to almost always actively changing their consumption pattern to include green beverages, spend more money on alternatives to conventional products and tend to choose the beverage with the highest regionality. Also, they are making an effort to buy plastic bottles made from recycled materials or labelled with the German *Mehrweg* symbol ( $p = 0.004 < 0.05$ ) and more likely make an extra effort and drive to certain supermarkets where green beverages are available for purchase ( $p = 0.009 < 0.05$ ).

One of the most common reasons people tend not to buy green beverages is because of their comfort zone and the convenience of buying the products they are familiar with. With only 12% of participants stating that time and convenience are almost always the main barrier to switching to green beverages, and 38% agreeing with this statement occasionally to fairly often, it is not as big a barrier in this target group as expected. Since the other half of participants do not seem to see time or convenience as a buying barrier, there is a possibility that these participants see the lack of knowledge about this niche market as a pervasive barrier, since none of them answered the knowledge test significantly correctly.

## 7.4 Construct analysis

Nine different constructs were presented in this thesis, four of which deal with psychographic characteristics as antecedents of attitude and the remaining five deal with the theory of planned behaviour. Four of the five constructs focus on the antecedents of buying behaviour, while the fifth construct relates exclusively to the frequency of green buying behaviour. Before hypotheses relating to intercorrelations between those constructs can be analysed, they must be tested on variance, their factor loading as well as Cronbach's Alpha.

When analysing the psychographic variables as a whole construct made out of the four smaller constructs with altruism, frugality, future time orientation and risk aversion, the variance resulted in  $0.41 < 0.5$ , which is insufficient, and the factor loadings were mostly below 0.5. Cronbach's Alpha for altruism was  $0.616 < 0.7$ , for frugality  $0.56 < 0.7$ , for future time orientation  $0.459 < 0.7$  after deleting TO2 as well as reverse coding TO4 and TO5. Thus, these three constructs cannot be used for further research on intercorrelations and are consequently eliminated from further research because they have neither reliability nor validity.

Risk aversion reached a Cronbach's Alpha of  $0.713 > 0.7$  after reverse coding RA1 and RA2 and deleting RA3, which then created a factor loading above 0.5 and a variance of  $0.49 < 0.5$ . Although the variance narrowly missed its target, risk aversion will not be ruled out.

The first construct of the theory of planned behaviour, attitude, has a variance of 0.51, which is greater than 0.5 and acceptable. Statement AT4 was dropped because it did not load on the same factor as the others and was less than 0.5. Cronbach's alpha is  $0.798 > 0.7$ , indicating that the items of the attitudinal construct are reliable and internally consistent.

Subjective Norm as a construct shows an acceptable variance of  $0.64 > 0.5$  after SN4 and SN5 were deleted due to different and insufficient ( $< 0.5$ ) factor loadings. Cronbach's Alpha is at  $0.745 > 0.7$ , which indicates a reliable and internally consistent construct.

Continuing with purchase intention, this construct has a variance of  $0.58 > 0.5$ , which is acceptable and has a factor loading  $> 0.7$  onto the same factor after deleting PI3 and PI4 and set Cronbach's Alpha at  $0.842 > 0.7$ , which shows construct reliability and consistency.

Perceived behavioural control has a variance of  $0.51 > 0.5$ , which is acceptable and a factor loading  $> 0.5$  onto the same factor after deleting PBC1 and PBC5, which resulted in a Cronbach's Alpha of  $0.728 > 0.7$ , indicating a reliable and internal consistent construct.

Lastly, the buying behaviour sets its variance at  $0.53 > 0.5$ , which is an acceptable value and a factor loading of  $> 0.6$  onto the same factor after deleting BB5, BB6, BB9, BB10 and BB11, which set Cronbach's Alpha at  $0.869 > 0.7$ , resulting in a reliable and consistent construct.

## 7.5 Hypotheses testing

The primary three hypotheses cannot be evaluated as the pre-tests on variance and reliability were not successful and thus have to be excluded from further investigations on inter-correlation between altruism, frugality, and future time orientation on other constructs.

When testing the intercorrelation between risk aversion and attitude, hypothesizing that risk aversion has a negative influence on individuals' attitude towards purchasing green beverages, no significance could be found as the two-sided p-value was 0.603, which is clearly above 0.05, and therefore the hypotheses cannot be supported.

Those respondents who stated that they (strongly) agree with the circumstances that they conduct dialogues with their peers and family and trust their opinion on what to buy have a highly significant correlation ( $p < 0.001$ ) to subjective norms, although this correlation expresses itself with a mean value of 3.4, which is rather neutral than positive. In addition, only 59 respondents indicated that they listen to the advice of peers when purchasing green beverages, while 112 respondents indicated that they take a neutral stance or tend not to ask their peers or family for advice on this issue, which was already recognizable with the descriptive analysis as Late Millennials and Gen Z do not tend to have dialogues about the availability or preference of green beverages. Therefore, the hypothesis of a positive effect of normative referents on subjective norms is not supported.

When analysing the influence of mass media on the subjective norms, no significant correlation could be found as the two-sided p-value was  $0.53 > 0.05$ , and the hypotheses could therefore not be supported. Also, the correlation analysis concerning the degree of knowledge on the perceived behavioural control could not yield significant results, as the two-sided p-values were bigger than 0.05 or scored a neutral degree of control.

The positive correlation between the attitude construct and the purchase intention construct has been highly significant ( $p < 0.001$ ) as those who (strongly) agreed with positive attitudes towards the purchase of green beverages, personal contribution to prevent climate change and advocacy for stricter anti-pollution laws, reached a mean value of 3.9 on purchase intention, which again indicates a positive effect of pro-environmental attitude on green purchase intention. Those who have a negative attitude towards green beverages scored respectively lower and more likely have a neutral purchase intention.

Subjective norms were also found to have a highly significant correlation ( $p < 0.001$ ) to green purchase intention as those respondents, who indicated that they seek the advice and dialogue concerning green beverages with their peers and family, score a mean value of 4.2 on purchase intention, meaning that those definitely consider switching to green beverages.

Those 77 participants who stated that they feel in control and capable of buying green beverages in the future or even currently, also have a highly significant ( $p < 0.001$ ) and positive green purchase intention with a mean value of 4.2. Therefore, similar to the correlation between subjective norms and purchase intention, the hypothesis can be confirmed. The next question is whether perceived behavioural control also has a significant direct correlation to actual green buying behaviour. The respondents, who feel in control and capable of buying green beverages score a highly significant ( $p < 0.001$ ) mean behavioural value of 3.5, which testifies a fairly frequent engagement in green buying behaviour. The positive purchase intention also translates significantly high ( $p < 0.001$ ) into quite frequent green buying behaviour with a mean value of 3.5, which then supports the last hypothesis.

	Hypothesis Description	Evaluation
H1(-)	Selfless altruism of Late Millennials and Generation Z does not tend to result in a positive attitude towards green consumption behaviour.	/
H2(+)	Late Millennials and Generation Z who show more frugal behaviour tend to have a positive attitude towards green consumption behaviour.	/
H3(+)	Late Millennials and Generation Z who show a higher future orientation tend to have a positive attitude towards green consumption behaviour.	/
H4(-)	Late Millennials and Generation Z who show a high degree of risk aversion tend to have a negative attitude towards green consumption behaviour.	Not Supported
H5a(+)	Late Millennials and Generation Z experience a positive relationship between normative referents and subjective norm to purchase green beverages.	Not Supported
H5b(-)	Late Millennials and Generation Z experience a negative relationship between mass media and subjective norm to purchase green beverages.	Not Supported
H6(+)	Late Millennials and Generation Z's lack of product knowledge negatively influences the perceived behavioural control to purchase green beverages.	Not Supported
H7a(+)	Attitude positively influences Late Millennials and Generation Z's purchase intention towards green beverages.	Supported
H7b(+)	Subjective norm positively influences Late Millennials and Generation Z's purchase intention towards green beverages.	Supported
H7c(+)	Perceived behavioural control positively influences Late Millennials and Generation Z's purchase intention towards green beverages.	Supported
H8a(+)	Perceived behavioural control of Late Millennials and Generation Z positively influences their actual buying behaviour towards green beverages.	Supported
H8b(+)	Purchase intention of Late Millennials and Generation Z positively influences their actual buying behaviour towards green beverages.	Supported

Table 1: Evaluation of hypotheses

## 8 Conclusion

### 8.1 Response to research questions

#### **Which internal (external) drivers steer the attitude and buying behaviour of German Late Millennials and Gen Z to actively buy (or reject) green products?**

Unfortunately, the most important internal influencing factors, namely the psychographic variables, could not be tested for significant correlations with the theory of planned behaviour, as some pretesting did not yield the hoped-for results. Also, the demographic variables were not applicable for significance testing on behalf of buying behaviour or the constructs from the theory of planned behaviour as the grouping was almost always tremendously unequal or there were significances measured on neutral attitudes, which do not hold high explanatory power and were therefore omitted if not indicated otherwise.

Nevertheless, attitude, subjective norms, perceived behavioural control, and green purchase intention have produced significant results in terms of indicated participation in green buying behaviour.

Subjective norms are thus external drivers that guide young people's behaviour in contact with peers or family, as they are focal points for advertising on a variety of topics. Respondents did not really rely on mass media communication about the benefits of buying green products, but also did not participate in conversations with peers about green beverages, which could be because this topic was quite new to many respondents, which became clear when the knowledge questions were evaluated.

The mere internal intention to buy such environmentally friendly products is an effective driver of green purchasing behaviour, but this intention is only transformed into actual behaviour if the individual selection criteria just as low switching costs or the availability of green beverages at multiple supermarkets and stores are met at the point of sale.

Although the four constructs that preceded environmentally friendly purchasing behaviour have shown a significant correlation with individual's purchasing behaviour, the younger generation, known for their opinionated and environmentally conscious personalities, has not yet begun to actively purchase environmentally friendly products and did not change their habits accordingly, but does participate occasionally when it is convenient for them.

#### **How can green consumers be segmented in order to yield green marketing benefits?**

A good starting point provides the green consumer segmentation according to Afonso et al. (2018) and Wang et al. (2018), which divides the consumers according to their individual

perception to which extent they feel they can help to tackle pressing topics as the climate crisis with their conscious consumption behaviour. Other separation criteria are the degree of environmental knowledge, individual willingness to invest time and resources to allocate green beverages or whether consumers engage in activistic activities.

Those items that were implemented in the various constructs to query the very items that were also used by the above researchers to divide respondents into the green consumer segments did not yield significant results when tested for intercorrelation. So, they were not included in the hypothesis-testing section and are discussed freely in terms of identified trends in relation to other observed tendencies of the queried generational cohort.

It is important for marketers to know when their consumers make the decision to buy their product. Whether it is a well-researched decision out of personal interests or impulsive purchases directly at the point of sale. Communication and information streams must be organised individually to defeat competitors, earn trust, and yield marketing benefits such as the effective allocation of new consumers or retaining existing customers. Especially those young consumers can be reached via mobile advertisements which ideally have some interactive component, so the individualistic gene of Gen Z is saturated, and they become indirect advertisers by further communicating their experience to their friends and family.

Another important item to assess the greenness of consumer behaviour is whether they perceive their purchasing customs that has an influence onto the overall environmental wellbeing and can be utilized as a societal tool to push positive change or whether the responsibility is all alone on state level. If companies also recognize those different societal streams, they can customize their efforts accordingly. For example, they can start to combine purchases of green beverages with proportionate donations per sale. Those efforts should be introduced carefully and organically with the company's image to give rise to a loyal and trusted connection between consumer and firm, so individuals feel that those companies actively try to give something back to society instead of solely chasing after profits.

## 8.2 Implications for future research

This work has made a fundamental contribution to research, as the purchasing behaviour of Generation Z, especially in relation to environmentally friendly purchases and the niche market of non-alcoholic beverages in the German industry, is very poorly researched and follow-up research is urgently needed to understand the mental restraints of consumers keeping them from switching to ecologically sound beverages and moreover improve communication strategies at the business-to-customer level in return.

In addition, research should be conducted over a longer period and, most importantly, through a variety of different communication channels to reach as many people as possible and avoid research bias such as a preponderance of students instead of full-time employees or trainees. Similarly, research should be expanded to reach equal segments of citizens from different states or to compare the situation between different federal states or even across countries. A more diverse set of survey participants from different backgrounds would also ease the significance testing for intercorrelations as the probability is then higher that the respondents can be divided into homogenous subgroups, which was not always possible due to the research bias introduced with the sampling method.

As for the failed significance tests for the psychographic variables, these can be reused with a larger target group to see if some significant correlations or trends are then apparent, or some statements shall be replaced with new ones from different research papers or individualized depending on the aspect of study.

### 8.3 Implications for practice

As Late Millennials and Generation Z are digital natives, marketing practitioners, who pursue the distribution of green beverages or products in general, need to open a dialogue via interactive platforms to create the awareness and sensibility in the consumer's minds for the availability of green substitutes. Furthermore, they need to realize that most of the consumers are not willing to actively seek out ecological beverages, they rather tend to decide at the point of sale which product they will buy. Therefore, it is crucial to communicate the product and its benefits transparently, so consumers can build trust towards the brand. Although most of the participants ranked reusable bottles as their most frequent beverage purchase, they also indicated that they are more comfortable to engage in the purchase of bottles made from recycled materials when switching away from conventional single-use bottles and cans than directly opting for ecologically sound beverages, which follows the principles of the well-known decoy-effect.

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## Appendix 1. Questionnaire in English

Dear participant,

my name is Annika Neu and I am currently in the 3rd year of my bachelor studies in International Business at HTW Saar in Saarbrücken (Germany) and am conducting this questionnaire as part of my thesis. Hereby I would like to kindly invite you to participate in my survey about "Green consumerism in the German non-alcoholic beverage industry" with a focus on the buying behaviour of Late Millennials and Generation Z (defined as individuals born from 1990 to 2005).

The processing of the questionnaire will take approximately **10-12 minutes** and the participation is completely **voluntarily**. You can choose between **English and German** (see above) as the editing language of this survey and your answers will be handled **anonymously**.

Within this survey the term **green beverage** is used repeatedly.

This term describes (non-alcoholic!) beverages, which create less harm to the environment as the packaging can be reused multiple times (Mehrweg) and the procurement is rather regional.

To thank you for your participation, I am giving away **2x 20€ vouchers** at the end of the survey, that can be redeemed in **over 500 stores** (MediaMarkt, IKEA, Eventim, Amazon etc.).

If you have questions regarding my research, do not hesitate to contact me via [annneu@htw-saarland.de](mailto:annneu@htw-saarland.de).

Best regards, Annika Neu

### Socio-Demographics (Choose one of the following answers.)

1. What gender do you identify as?\*

- Female
- Male
- Diverse
- Prefer not to answer

2. In which year were you born in?\*

*Drop-Down Question*

(2005, 2004, 2003, 2002, 2001, 2000, 1999, 1998, ..., 1990)

3. Is your main residence in Germany?\*

- Yes
- No

4. In which federal state do you live in?\*

*Drop-Down Question*

(Baden Württemberg, Bavaria, Berlin, Brandenburg, Bremen, Hamburg, Hessen, Mecklenburg-West Pomerania, Lower Saxony, North Rhine Westphalia, Rhineland Palatinate, Saarland, Saxony, Saxony Anhalt, Schleswig-Holstein, Thuringia)

5. What is the highest degree or level of education you have completed?\*

- Secondary school certificate
- A-Levels
- Apprenticeship
- Bachelor's degree
- Master's degree
- PhD or higher
- None of the above
- Prefer not to answer

6. What is your current position of employment?\*

- Unemployed
- Student
- Minor employment (450€ basis)
- Employed Part-Time
- Employed Full-Time
- Prefer not to answer

7. What is your living situation?\*

- with parent(s)
- alone
- with partner
- with child/ children
- with partner and child/ children
- with roommates
- Prefer not to answer

8. How much do you spend on groceries on a monthly basis?\*

- 0 – 100€
- 101 – 200€
- 201 – 300€
- >300€

## Psychographics

Please state how you feel about the following statements by choosing the appropriate response for each item.

1. This question deals with your degree of **altruism**. Tick the category below that conforms to the frequency with which you have carried out the following acts:\*

		Never	Once	More than once	Often	Very Often
SA1	I have given money to a stranger who needed it (or asked for it).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA2	I have donated goods, clothes or money to a charity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA3	I have let someone borrow an item of some value to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA4	I have allowed someone to go ahead of me in a line-up (e.g. in the supermarket).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA5	I have delayed an elevator and held the door open for a stranger.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. This question deals with your **frugality**. Tick the category below that conforms to the degree....\*

		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
F1	I am proactively searching for ways to avoid waste in my daily life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F2	There are things that I resist buying today so I can save for tomorrow.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F3	There are many things that are normally thrown away that I still find quite useful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F4	Making better use of my personal resources makes me feel good.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F5	If you take good care of your possessions, you will definitely save money in the long run.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. This question deals with **future time orientation**. Tick the category below that conforms to the degree ....\*

		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
TO1	When I want to achieve something, I set goals and consider specific means for reaching those goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TO2	Since whatever will be, will be it does not really matter what I do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TO3	I am able to resist temptations when I know there is work to be done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TO4	It doesn't make sense to worry about the future, since there is nothing that I can do about it anyway.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TO5	It takes joy out of the process and flow of my activities, if I have to think about goals, outcomes, and products.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. This question deals with **risk aversion**. Tick the category below that conforms to the degree ....\*

		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
RA1	I don't like to take risks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RA2	I have no desire to take unnecessary chances on things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RA3	To achieve something in life one must take risks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RA4	If there was a great chance of reward, I will take high risks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Theory of Planned Behaviour

Please state how you feel about the following statements by choosing the appropriate response for each item.

1. This question is about your personal **attitude** towards participating in green purchases. Tick the category below that conforms to the degree with which you agree to the following statements:\*

		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
AT1	I am very concerned about the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AT2	Purchasing green is necessary to personally contribute to positive change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AT3	I have a favourable attitude toward purchasing green versions of a product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AT4	My individual buying behaviour can contribute very little to solve environmental problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AT5	Anti-pollution laws should be enforced more strongly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. This question deals with the influence of your **subjective norms** towards your intention to purchase green beverages. Tick the category below that conforms to the degree ....\*

		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
SN1	I talk with my family and/or peers about purchasing green beverage products.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN2	My family and or peers encourage me to buy green beverages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN3	I seek out the advice of my family and/ or peers regarding which green beverages to buy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN4	Mass media communicates the benefits of purchasing green beverages to a trustworthy and comprehensible extent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN5	I trust the purchasing advice of my family and/or peers more than I trust what mass media communicates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(?) Subjective norms describe the social pressure you experience from the engagement and belonging to certain social groups (family, friends, peers, colleagues), which either encourage or discourage your participation in certain behaviour (purchase of green beverages).

3. This question deals with your personal **purchase intention** towards purchasing green beverages. Tick the category below that conforms to the degree ....\*

		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
P11	I will consider switching to environmentally friendly beverages for ecological reasons.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P12	I plan to spend more on environmentally friendly beverages rather than conventional beverages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P13	I would spend more on green beverages if their benefits would be communicated more transparently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P14	I will try to buy beverages that can be recycled or refilled.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P15	I definitely want to purchase green beverages in near future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. This question deals with your subjectively **perceived behavioural control** towards purchasing green beverages. Tick the category below that conforms to the degree ...\*:

		Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
PBC1	I believe that I have the ability to purchase green beverages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC2	If it were entirely up to me, I am confident that I will purchase green beverages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC3	I see myself as capable of purchasing green beverages in future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC4	I have resources, time and willingness to purchase green beverages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC5	I feel that purchasing green beverages is not totally within my control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(?) Perceived behavioural control describes the subjectively perceived ease or difficulty to perform a particular behaviour (purchasing green beverages) based on past experiences and evaluated obstacles (knowledge, availability, monetary and time resources, social norms).

### Disposal System Knowledge

With the next two questions, we analyse the general level of knowledge about the deposit system in Germany. In this way, we would like to check the transparent dissemination of information by the industry and therefore ask you to evaluate the statements according to your level of knowledge.

Image: [https://www.oekotest.de/static\\_files/images/article/Mehrweg-Einweg-Karton-Welche-Getraenkeverpackung-ist-am-besten\\_10728\\_lead.jpg](https://www.oekotest.de/static_files/images/article/Mehrweg-Einweg-Karton-Welche-Getraenkeverpackung-ist-am-besten_10728_lead.jpg)

1. Please state if the following statements concerning the disposal of single-use bottles are true or false based on your personal knowledge.\*

		True	False	Unsure
D1	Bottles with the right symbol (see image) get recycled and made into new bottles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D2	Bottles with the right symbol get recycled into other plastic products (foils).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D3	Bottles with the right symbol have a bad ecological balance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Please state if the following statements concerning the disposal of multi-use bottles are true or false based on your personal knowledge.\*

		True	False
M1	Plastic bottles with the left symbol(s) (see image) can be refilled up to 15 times and up to 50 times if it's a glass bottle.	<input type="checkbox"/>	<input type="checkbox"/>
M2	Mehrweg bottles are provided with legally required clear labelling, which makes it easy to recognize them.	<input type="checkbox"/>	<input type="checkbox"/>
M3	The pledge for Mehrweg bottles is more expensive than for disposable bottles.	<input type="checkbox"/>	<input type="checkbox"/>

### Green Buying Behaviour

This chapter deals with your actual participation in green buying behaviour, thus the purchasing of green beverages.

1. Please reflect your own buying behaviour and rank the following three beverage types according to your frequency of purchasing them. All your answers must be different, and you must rank in order.

Your choices		Your ranking
Multi-use (Mehrweg) bottle	Rank1	DRAG & DROP
Bottle from recycled materials	Rank2	
Disposable bottle or can	Rank3	

**Disposable bottles** refer to glass or plastic bottles and aluminium cans that are disposed of after single use.

**Bottles from recycled materials** are advertised with a certain percentage (up to 100%) of recycled plastics.

**Multi-use (Mehrweg) bottles** refer to multi-use glass or hard plastic bottles which will be refilled and resold after return.

2. Please indicate how often you find yourself in the following scenarios by selecting the appropriate response for each item.\*

		Never	Rarely	Every Once in a While	Sometimes	Almost Always
BB1	I have boycotted or avoided buying beverages of a company because I felt that company was harming the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB2	I have made extra efforts to seek out environmentally friendly beverages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB3	When there is a choice, I choose the beverage with packaging that contributes to the least amount of pollution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB4	I have switched beverages for ecological reasons.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB5	If I understand the potential damage to the environment that some products can cause, I do not purchase these products.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB6	When I buy plastic bottles, I make an effort to buy plastic products made from recycled materials or with the <i>Mehrweg</i> symbol.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attention	If you read this and completed the survey conscientiously, tick sometimes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB7	I am actively changing my consumption pattern to include green beverages as much as possible.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB8	I am spending more money on alternative beverages if I know they're less harmful to the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB9	In order to purchase green beverages, I (have to) make an extra effort and drive to certain supermarkets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB10	Convenience and time are the main barriers why I decide to not buy environmentally friendly beverages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB11	When there is a choice, I choose the beverage with the highest regionality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you would like to participate in the raffle, please enter your email address in the text box below.

(?) Your e-mail address will be recorded independently of your answers and is only valid if the questionnaire is fully completed.

Thank you very much for taking the time to participate in my survey!

The winners of the competition will be contacted by email before Christmas.

## Appendix 2. Questionnaire in German

Liebe Teilnehmerin, lieber Teilnehmer,  
 mein Name ist Annika Neu und ich befinde mich derzeit im 3. Jahr meines Bachelorstudiums in International Business an der htw saar in Saarbrücken (Deutschland) und führe diesen Fragebogen im Rahmen meiner Abschlussarbeit durch. Hiermit möchte ich Sie herzlich einladen, an meiner Umfrage zum Thema "Ökologischer Konsum in der deutschen alkoholfreien Getränkeindustrie" teilzunehmen. Der Fokus liegt dabei auf dem Kaufverhalten der Late Millennials und der Generation Z (definiert als Personen, die zwischen 1990 und 2005 geboren wurden). Die Bearbeitung des Fragebogens wird **ca. 10-12 Minuten** in Anspruch nehmen und die Teilnahme ist völlig **freiwillig**. Sie können zwischen **Englisch und Deutsch** (siehe oben) als Bearbeitungssprache dieser Umfrage wählen und Ihre Antworten werden **anonym** behandelt.  
 In dieser Umfrage wird immer wieder der Begriff **umweltfreundliches/ ökologisches Getränk** verwendet. Dieser Begriff beschreibt (alkoholfreie!) Getränke, die die Umwelt weniger belasten, da die Verpackungen mehrfach wiederverwendet werden können (Mehrweg) und die Beschaffung eher regional ist.  
 Als Dankeschön für Ihre Teilnahme verlose ich am Ende der Umfrage **2x 20€ Gutscheine**, die in **über 500 Geschäften** (MediaMarkt, IKEA, Eventim, Amazon etc.) eingelöst werden können.  
 Wenn Sie Fragen zu meiner Recherche haben, zögern Sie nicht, mich über [annneu@htw-saarland.de](mailto:annneu@htw-saarland.de) zu kontaktieren.  
 Herzliche Grüße, Annika Neu

### Soziodemographische Daten (Bitte wählen Sie eine der folgenden Antworten.)

1. Mit welchem Geschlecht identifizieren Sie sich?\*
  - Weiblich
  - Männlich
  - Divers
  - Keine Antwort
2. In welchem Jahr wurden Sie geboren?\*
 

*Drop-Down Frage*

 (2005, 2004, 2003, 2002, 2001, 2000, 1999, 1998, ..., 1990)
3. Ist Ihr Hauptwohnsitz in Deutschland?\*
  - Ja
  - Nein
4. In welchem Bundesland leben Sie?\*
 

*Drop-Down Frage*

 (Baden-Württemberg, Bayern, Berlin, Brandenburg, Bremen, Hamburg, Hessen, Mecklenburg-Vorpommern, Niedersachsen, Nordrhein-Westfalen, Rheinland-Pfalz, Saarland, Sachsen, Sachsen-Anhalt, Schleswig-Holstein, Thüringen)
5. Welcher ist der höchste Abschluss, den Sie erworben haben?\*
  - Mittlere Reife
  - (Fach-)Abitur
  - Ausbildung
  - Bachelor-Abschluss
  - Master-Abschluss
  - Promotion oder höher
  - Keine der oben genannten
  - Keine Antwort
6. In welcher Position sind Sie derzeit beschäftigt?\*
  - Arbeitslos
  - Student/in
  - Aushilfe (450€-Basis)
  - Teilzeit
  - Vollzeit
  - Keine Antwort
7. Wie ist Ihre derzeitige Wohnsituation?\*
  - Mit einem Elternteil/ mit beiden Elternteilen
  - Alleine
  - Mit Partner/in
  - Mit Kind/ Kindern
  - Mit Partner/in und Kind/ Kindern
  - Mit Mitbewohner/innen
  - Keine Antwort
8. Wie viel Geld geben Sie monatlich für Lebensmittel aus?\*
  - 0 – 100€
  - 101 – 200€
  - 201 – 300€
  - >300€

## Psychographische Daten

Bitte geben Sie an, wie Sie die folgenden Aussagen bewerten, indem Sie die entsprechende Antwort für jede Aussage auswählen.

1. Bei dieser Frage geht es um den Grad Ihrer **Selbstlosigkeit**. Kreuzen Sie unten die Kategorie an, die der Häufigkeit entspricht, mit der Sie die folgenden Handlungen durchgeführt haben:\*

		Nie	Einmal	Mehrmals	Oft	Sehr oft
SA1	Ich habe Geld an Fremde gegeben, die es brauchten (oder darum gebeten haben).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA2	Ich habe Waren, Kleidung oder Geld an eine Wohltätigkeitsorganisation gespendet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA3	Ich habe jemandem einen Gegenstand geliehen, der für mich einen gewissen Wert hat.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA4	Ich habe jemandem erlaubt, sich in einer Schlange vor mich zu stellen (z. B. im Supermarkt).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SA5	Ich habe (einen Aufzug aufgehalten und) die Tür für einen Fremden offen gehalten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Diese Frage befasst sich mit Ihrer **Sparsamkeit**. Kreuzen Sie unten die Kategorie an, die dem Grad ....\*

		Trifft gar nicht zu	Trifft eher nicht zu	Weder noch	Trifft überwiegend zu	Trifft voll und ganz zu
F1	Ich suche proaktiv nach Möglichkeiten, in meinem täglichen Leben Abfall zu vermeiden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F2	Es gibt Dinge, die ich heute nicht kaufe, um für morgen zu sparen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F3	Es gibt viele Dinge, die normalerweise weggeworfen werden, die ich aber noch ganz nützlich finde.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F4	Wenn ich meine persönlichen Ressourcen besser nutze, fühle ich mich gut.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F5	Wenn ich mich gut um mein Eigentum kümmere, werden ich auf lange Sicht auf jeden Fall Geld sparen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Diese Frage befasst sich mit Ihrer **Zeitorientierung**. Kreuzen Sie unten die Kategorie an, die dem Grad ....\*

		Trifft gar nicht zu	Trifft eher nicht zu	Weder noch	Trifft überwiegend zu	Trifft voll und ganz zu
TO1	Wenn ich etwas erreichen will, setze ich mir Ziele und überlege mir, wie ich diese Ziele erreichen kann.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TO2	Da alles kommen wird wie es kommt, ist es eigentlich egal, was ich tue.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TO3	Ich kann Versuchungen widerstehen, wenn ich weiß, dass ich etwas zu erledigen habe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TO4	Es macht keinen Sinn, mir über die Zukunft Gedanken zu machen, da ich diese sowieso nicht beeinflussen kann.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TO5	Es nimmt mir die Freude am Prozess meiner Tätigkeiten, wenn ich über deren Ziele und Ergebnisse nachdenken muss.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Diese Frage befasst sich mit Ihrer **Risikoaversion**. Kreuzen Sie unten die Kategorie an, die dem Grad ....\*

		Trifft gar nicht zu	Trifft eher nicht zu	Weder noch	Trifft überwiegend zu	Trifft voll und ganz zu
RA1	Ich gehe nicht gerne Risiken ein.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RA2	Ich habe keine Lust, unnötige Risiken einzugehen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RA3	Um im Leben etwas zu erreichen, muss man Risiken eingehen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RA4	Wenn es eine große Chance auf eine Belohnung gibt, gehe ich hohe Risiken ein.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Theorie des geplanten Verhaltens

Bitte geben Sie an, was Sie von den folgenden Aussagen halten, indem Sie die entsprechende Antwort für jeden Punkt auswählen.

1. Diese Frage bezieht sich auf Ihre **persönliche Einstellung** zur Teilnahme an ökologischen Einkäufen. Kreuzen Sie unten die Kategorie an, die dem Grad Ihrer Zustimmung zu den folgenden Aussagen entspricht:\*

		Trifft gar nicht zu	Trifft eher nicht zu	Weder noch	Trifft überwiegend zu	Trifft voll und ganz zu
AT1	Ich mache mir große Sorgen um die Umwelt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AT2	Umweltfreundlich einzukaufen ist notwendig, um persönlich zu einem positiven Wandel beizutragen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AT3	Ich habe eine positive Einstellung zum Kauf umweltfreundlicher Versionen eines Produkts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AT4	Mein individuelles Kaufverhalten kann nur wenig zur Lösung von Umweltproblemen beitragen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AT5	Die Gesetze zur Bekämpfung der Umweltverschmutzung sollten stärker durchgesetzt werden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Diese Frage befasst sich mit dem Einfluss Ihrer **subjektiven Normen** auf Ihre Absicht, umweltfreundliche Getränke zu kaufen. Kreuzen Sie unten die Kategorie an, die dem Grad ....\*:

		Trifft gar nicht zu	Trifft eher nicht zu	Weder noch	Trifft überwiegend zu	Trifft voll und ganz zu
SN1	Ich spreche mit meiner Familie und/oder Freunden über den Kauf ökologischer Getränke.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN2	Meine Familie und meine Mitmenschen ermutigen mich, umweltfreundliche Getränke zu kaufen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN3	Ich hole mir den Rat meiner Familie und/oder Kollegen ein, welche (ökologischen) Getränke ich kaufen sollte.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN4	Die Massenmedien kommunizieren die Vorteile des Kaufs von umweltfreundlichen Getränken in einem vertrauenswürdigen und verständlichen Umfang.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN5	Ich vertraue der Kaufberatung meiner Familie und/oder Gleichaltrigen mehr als dem, was die Massenmedien verbreiten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(?) Subjektive Normen beschreiben den sozialen Druck, den man durch das Engagement und die Zugehörigkeit zu bestimmten sozialen Gruppen (Familie, Freunde, Gleichaltrige, Kollegen) erfährt und der einen entweder zu einem bestimmten Verhalten (Kauf von ökologischen Getränken) ermutigt oder davon abhält.

3. Bei dieser Frage geht es um Ihre persönliche **Kaufabsicht** in Bezug auf den Kauf von ökologischen Getränken. Kreuzen Sie unten die Kategorie an, die dem Grad ....\*:

		Trifft gar nicht zu	Trifft eher nicht zu	Weder noch	Trifft überwiegend zu	Trifft voll und ganz zu
PI1	Ich werde den Umstieg auf umweltfreundliche Getränke aus ökologischen Gründen in Betracht ziehen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PI2	Ich habe vor, mehr für umweltfreundliche Getränke auszugeben als für konventionelle Getränke.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PI3	Ich würde mehr für umweltfreundliche Getränke ausgeben, wenn ihre Vorteile transparenter kommuniziert würden.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PI4	Ich werde versuchen, Getränke zu kaufen, die recycelt oder wiederbefüllt werden können.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PI5	Ich möchte in naher Zukunft auf jeden Fall umweltfreundliche Getränke kaufen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Diese Frage bezieht sich auf Ihre **subjektiv wahrgenommene Verhaltenskontrolle**. Kreuzen Sie unten die Kategorie an, die dem Grad ....\*

		Trifft gar nicht zu	Trifft eher nicht zu	Weder noch	Trifft überwiegend zu	Trifft voll und ganz zu
PBC1	Ich glaube, dass ich die Möglichkeit habe, grüne Getränke zu kaufen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC2	Wenn es ganz nach mir ginge, würde ich sicher grüne Getränke kaufen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC3	Ich sehe mich in der Lage, in Zukunft grüne Getränke zu kaufen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC4	Ich habe die Mittel, die Zeit und die Bereitschaft, grüne Getränke zu kaufen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC5	Ich habe das Gefühl, dass der Kauf von grünen Getränken nicht vollständig in meiner Hand liegt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(?) Die wahrgenommene Verhaltenskontrolle beschreibt die subjektiv empfundene Leichtigkeit oder Schwierigkeit, ein bestimmtes Verhalten (den Kauf von umweltfreundlichen Getränken) auf der Grundlage früherer Erfahrungen und bewerteter Hindernisse (Wissen, Verfügbarkeit, finanzielle und zeitliche Ressourcen, soziale Normen) auszuführen.

### Pfandsystem Wissen

Mit den nächsten beiden Fragen analysieren wir den allgemeinen Wissensstand über das Pfandsystem in Deutschland. Auf diese Weise möchten wir die transparente Informationsvermittlung der Branche überprüfen und bitten Sie daher, die Aussagen nach Ihrem aktuellen Kenntnisstand zu bewerten.

Image: [https://www.oekotest.de/static\\_files/images/article/Mehrweg-Einweg-Karton-Welche-Getraenkeverpackung-ist-am-besten\\_10728\\_lead.jpg](https://www.oekotest.de/static_files/images/article/Mehrweg-Einweg-Karton-Welche-Getraenkeverpackung-ist-am-besten_10728_lead.jpg)

1. Bitte geben Sie an, ob die folgenden Aussagen über die Entsorgung von Einwegflaschen nach Ihrem persönlichen Kenntnisstand wahr oder falsch sind.\*

		Wahr	Falsch	Unsicher
D1	Flaschen mit dem rechten Symbol (s. Bild) werden recycelt und zu neuen Flaschen verarbeitet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D2	Flaschen mit dem rechten Symbol werden zu anderen Kunststoffprodukten (Folien) recycelt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D3	Flaschen mit dem rechten Symbol haben eine schlechte Ökobilanz.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Bitte geben Sie an, ob die folgenden Aussagen über die Entsorgung von Mehrwegflaschen nach Ihrem persönlichen Kenntnisstand wahr oder falsch sind.\*

		Wahr	Falsch
M1	Plastikflaschen mit dem (den) linken Symbol(en) (s. Bild) können bis zu 15 Mal und Glasflaschen bis zu 50 Mal wiederbefüllt werden.	<input type="checkbox"/>	<input type="checkbox"/>
M2	Die Mehrweg-Flaschen sind mit der gesetzlich vorgeschriebenen eindeutigen Kennzeichnung versehen, so dass sie leicht zu erkennen sind.	<input type="checkbox"/>	<input type="checkbox"/>
M3	Das Pfand für Mehrwegflaschen ist teurer als für Einwegflaschen.	<input type="checkbox"/>	<input type="checkbox"/>

### Ökologisches Kaufverhalten

In diesem Kapitel geht es um Ihre tatsächliche Beteiligung an grünem Kaufverhalten, also den Kauf von grünen Getränken.

1. Bitte reflektieren Sie Ihr eigenes Kaufverhalten und ordnen Sie die folgenden drei Getränkearten nach Ihrer Konsumhäufigkeit ein. Alle Ihre Antworten müssen unterschiedlich sein, und müssen zugeordnet sein. Ordnen Sie die Elemente in die rechte Liste ein (höchste Bewertung oben).

Ihre Auswahl		Ihre Rangfolge
Mehrweg Flasche	Rank1	DRAG & DROP
Flasche aus recycelten Materialien	Rank2	
Einweg Flasche oder Dose	Rank3	

(?) **Einwegflaschen** bezeichnen Flaschen aus Glas oder Kunststoff und Aluminiumdosen, die nach einmaligem Gebrauch entsorgt werden.

**Flaschen aus recycelten Materialien** werden mit einem bestimmten Prozentsatz (bis zu 100%) an recyceltem Kunststoff beworben.

**Mehrwegflaschen** bezeichnen Flaschen aus Glas oder Hartplastik, die nach der Rückgabe wiederbefüllt und weiterverkauft werden.

2. Bitte geben Sie an, wie oft Sie sich in den folgenden Szenarien wiederfinden, indem Sie die entsprechende Antwort für jeden Punkt auswählen.\*

		Nie	Selten	Manchmal	Oft	(Fast) immer
BB1	Ich habe Getränke eines Unternehmens boykottiert oder nicht gekauft, weil ich der Meinung war, dass dieses Unternehmen die Umwelt schädigt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB2	Ich habe zusätzliche Anstrengungen unternommen, um umweltfreundliche Getränke zu kaufen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB3	Wenn ich die Wahl habe, wähle ich das Getränk mit der Verpackung, die am wenigsten zur Umweltverschmutzung beiträgt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB4	Ich habe aus ökologischen Gründen auf andere Getränke umgestellt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB5	Wenn ich weiß, dass einige Produkte die Umwelt schädigen können, kaufe ich diese Produkte nicht.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB6	Wenn ich Kunststoffflaschen kaufe, bemühe ich mich, Kunststoffprodukte aus recyceltem Material oder mit dem Mehrweg-Symbol zu kaufen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attention	Wenn Sie dies lesen und die Umfrage gewissenhaft ausgefüllt haben, kreuzen Sie bitte manchmal an.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB7	Ich ändere mein Konsumverhalten aktiv und trinke so oft wie möglich umweltfreundliche Getränke.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB8	Ich gebe mehr Geld für alternative Getränke aus, wenn ich weiß, dass sie weniger umweltschädlich sind.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB9	Um umweltfreundliche Getränke zu kaufen, muss ich zu bestimmten Supermärkten fahren.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB10	Bequemlichkeit und Zeit sind die Haupthindernisse, warum ich keine umweltfreundlichen Getränke kaufe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BB11	Wenn ich die Wahl habe, entscheide ich mich für das Getränk mit der höchsten Regionalität.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Wenn Sie an der Verlosung teilnehmen möchten, geben Sie bitte Ihre E-Mail-Adresse in das untenstehende Textfeld ein.

(?) Ihre E-Mail-Adresse wird unabhängig von Ihren Antworten gespeichert und ist nur gültig, wenn der Fragebogen vollständig ausgefüllt wurde.

Vielen Dank, dass Sie sich die Zeit genommen haben, an meiner Umfrage teilzunehmen!

Die Gewinner der Verlosung werden noch vor Weihnachten per E-Mail benachrichtigt.