Innovation in Plant-Based Confectionery Alternatives in the German FMCG Sector

An Empirical Investigation about Determinants of Generation Z's Purchase Intention of Vegan Chocolate Confectionery in Germany Using the Theory of Planned Behavior

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Dissertation written under the supervision of Miguel Rita Fontes

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ABSTRACT

Chocolate is consumed worldwide and with the trend towards plant-based alternatives, chocolate products have also been altered to cater the needs of vegans. Gen Z, known for their growing significant purchasing power, is already reshaping the consumer landscape. To thrive in this evolving market, chocolate manufacturers must understand Gen Z's behavior.

Utilizing the Theory of Planned Behavior, this dissertation examines the determinants of Generation Z's purchase intention of vegan chocolate within the German market. The original Theory of Planned Behavior, investigating the influence of attitudes, subjective norms, and perceived behavioral control on purchase intention, is extended with health awareness, environmental concern, animal welfare, social influence, product knowledge, self-image congruence, and environmental self-identity.

Qualitative research was employed as an initial exploratory step followed by a quantitative study. The findings reveal that the German Generation Z's purchase intentions for vegan chocolate are primarily influenced by attitudes towards vegan chocolate, subjective norms, and perceived behavioral control. The model extension underscores the significant influence of product knowledge and self-image congruence on purchase intention. Additionally, environmental concerns, animal welfare, social influence, and product knowledge shape the attitudes towards purchasing vegan chocolate.

Despite this study's limitations such as a non-generalizable sample and the absence of a realistic shopping experience, it provides actionable insights for marketing, brand, and product managers, underscoring the need to align the products with the values of Gen Z, develop appealing flavors, ensure transparent and ethical labeling, and leverage modern marketing strategies.

Keywords: consumer behavior, theory of planned behavior, fmcg, confectionery, vegan chocolate, Generation Z

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RESUMO

O chocolate é consumido mundialmente e, com a tendência das alternativas à base de plantas, os produtos de chocolate foram ajustados para veganos. A Geração Z, com crescente poder de compra, está a remodelar o consumo. Para prosperar, os fabricantes de chocolate devem compreender o comportamento da Geração Z.

Utilizando a Teoria do Comportamento Planeado, esta dissertação examina os determinantes da intenção de compra de chocolate vegan pela Geração Z no mercado da Alemanha. A teoria original, que investiga a influência das atitudes, normas subjetivas e controlo comportamental percebido na intenção de compra, é ampliada com saúde, preocupação ambiental, bem-estar animal, influência social, conhecimento do produto, congruência da autoimagem e identidade ambiental.

Foi realizada uma pesquisa qualitativa como passo exploratório inicial, seguida de um estudo quantitativo. Os resultados revelam que as intenções de compra de chocolate vegan pela Geração Z alemã são influenciadas pelas atitudes em relação ao chocolate vegan, norma subjetiva e controlo comportamental percebido. A ampliação do modelo destaca a influência do conhecimento do produto e da congruência da autoimagem na intenção de compra. Além disso, preocupações ambientais, bem-estar animal, influência social e conhecimento do produto moldam as atitudes em relação à compra de chocolate vegan.

Apesar das limitações do estudo, como a amostra não generalizável e a ausência de uma experiência de compra realista, ele fornece perceções úteis para gestores de marketing e produto, sublinhando a necessidade de alinhar produtos com os valores da Geração Z, garantir rotulagem transparente e ética, e utilizar estratégias de marketing modernas.

Palavras-chave: comportamento do consumidor, teoria do comportamento planeado, FMCG, produtos de pastelaria, chocolate vegan, Geração Z

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LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
CAGR	Compound Annual Growth Rate
DV	Dependent Variable
FMCG	Fast Moving Consumer Goods
IV	Independent Variable
KMO	Kaiser-Meyer-Olkin
PBC	Perceived Behavioral Control
PI	Purchase Intention
SN	Subjective Norm
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action

LIST OF SYMBOLS

α	Significance Level
R^2	Adjusted Coefficient of Determination
β	Standardized Beta Coefficient
B	Unstandardized Coefficient
F	F-value
p	Probability Value, Significance
t	t-value

1 INTRODUCTION

1.1 Relevance

Sustainability is increasingly important to a growing number of consumers (Djekic et al., 2021; Hilgenstock & Jirmann, 2001; UN, n.d.), a trend that is particularly evident in the food sector due to the significant environmental impact of animal products (Sesini et al., 2020; Umweltbundesamt, 2022). This shift in consumer consciousness is reflected in the diversification of dietary choices (Moller et al., 2019). Among these, veganism is gaining notable appeal as more consumers opt for vegan or vegetarian diets, moving away from traditional animal-based products (Windscheid et al., 2020) while reducing one's carbon footprint (Shende et al., 2015). In Germany, a country with a population of 84.6 million (Statistisches Bundesamt, n.d.), approximately 1.52 million individuals identify as vegan (IfD Allensbach, 2023).

Veganism is defined as "a philosophy and way of living which seeks to exclude – as far as is possible and practicable – all forms of exploitation of, and cruelty to, animals for food, clothing or other purpose" (The Vegan Society, n.d., no pagination), indicating that humans who follow a vegan diet are mainly concerned about ethical aspects of their consumption such as animal welfare (Purtill, 2018) or the environment (Petter, 2018). Carrington (2018) revealed that one's individual footprint can be reduced by up to 73 percent when omitting meat and dairy products from one's diet. In addition, the vegan lifestyle is associated with health benefits such as reducing chronic disease-related risk (Dyett et al, 2013). In general, German vegans tend to be younger due to their character traits, with 33 percent belonging to Generation Z (Statista, 2024b), a demographic group known for its strong stance on environmental issues and ethical consumption.

The rise of veganism has catalyzed significant changes in various food sectors, including confectionery because a vegan diet does not necessarily have to mean sacrifice. Confronted by the rising popularity of veganism, businesses began to develop substitutes catering to individuals who choose this way of life. These alternatives also appeal to those who, due to health reasons, cannot consume animal-derived products, along with those who equate "vegan" with "healthy" (Janssen et al, 2016). Consequently, the growing preference for plant-based diets is reshaping the confectionery market. In Germany 633,652 tons of confectionery were sold in 2023 of which eight percent were vegan (LZ, 2023). The industry is expected to generate revenues of roughly 17.72 billion Euros in 2024 (Statista, 2024a). The confectionery industry can be segmented into four sub-segments: Chocolate confectionery, sugar-based confections,

premium baked goods, and ice cream. This thesis solely analyzes the chocolate confectionery segment with a focus on vegan chocolate confectionery, which means that it does not contain animal products such as gelatin, toffees, or dairy. The overall shift towards vegan chocolate in Germany presents a unique opportunity to explore the determinants of Generation Z's purchase intention (PI). Exploring these determinants will provide valuable insights for businesses seeking to innovate in the confectionery market and align with the evolving preferences of younger consumers.

1.2 Problem Definition and Research Objective

Consumer behavior is an ever-evolving concept in the field of marketing (Hyde, 2017) and today's trend towards vegan confectionery influences the consumer's PI, which is the most precise prediction of purchase behavior (Morwitz & Schmittlein, 1992). The PI emerges during the stages of the purchase process. When consumers recognize a need, they seek information and evaluate different products or services, shaping their PI. This refers to the likelihood that a consumer will choose to buy a specific product or service (Grewal et al., 1998). Ajzen's (1985) Theory of Planned Behavior (TPB) is one of the most influential concepts when studying human action. The individual's intention to carry out a certain behavior is central and depends on their attitude towards the behavior, subjective norm (SN), and perceived behavioral control (PBC). The framework has been used to understand individual's intentions with respect to organic food and beverage purchasing practices (e.g., Chang & Chang, 2017; Ricci et al., 2018; Singh & Verma, 2017; Wee et al., 2014).

In recent years, PI of healthy food choices (Åstrosm & Rise, 2001; Hibbert et al., 2007), plant-based yogurt (Pandey et al., 2021) as well as attitude towards vegan diets (Contini et al., 2020; Miguel et al., 2021) have been examined. Del Prete and Samoggia's (2020) meta-analysis investigates the influencing factors on consumer behavior towards chocolate. However, there is a lack of studies exploring factors influencing PI towards vegan chocolate. Based on the wide usage of the TPB model, it is also used in this study. Most research under TPB treats different age groups as homogeneous, suggesting no difference between different age groups overlooking significant generational differences (e.g., Nguyen et al., 2017; Paul et al., 2016; Wu & Chen, 2014). Amoako et al. (2020), Cowan and Kinley (2014) illustrate that when generation is considered as a factor in predicting consumption behavior, the results vary. Given the growing purchasing power of Generation Z (Mondres, 2023; Priporas et al., 2017), their influence on the FMCG market is significant. Consequently, it is essential to deepen the understanding of this generation (Jain et al., 2014) paired with the veganism trend.

Together with the increasing interest of young German consumers in vegan products (YouGov, 2019) the German vegan chocolate market shows promising potential for the future since more than two thirds of the German consumers have already purchased substitute products (PwC & POSpulse, 2022). Although the field of plant-based substitutes seems to have a promising potential to elaborate determinants of PI, research in this field has focused on exploratory motives behind the avoidance of animal products (e.g., Hodson & Earle, 2018; Marangon et al., 2016; Radnitz et al., 2015; Janssen et al., 2016) and consumption of vegan products (e.g., Ågren et al., 2001; D'Souza et al., 2022; Ploll & Stern, 2020; Povey et al., 2001). The research problem was developed as follows attempting to address the before mentioned gap: *"Providing a better understanding of the German Generation Z's purchase intention of vegan chocolate confectionery"*.

Therefore, this study aims to elaborate on the determinants of Gen Z's PI of vegan chocolate within the German market. To answer the main research objective of this study, *"What are the determinants of Generation Z's purchase intention of vegan chocolate confectionery within the German market?"*, the following research questions can be introduced:

RQ_1: What are the main barriers and concerns that prevent German Gen Z from purchasing vegan chocolate confectionery?

RQ_2: What are the main drivers for German Gen Z to purchase vegan chocolate confectionery?

RQ_3: Which factors influence the purchase intentions of Generation Z towards vegan chocolate confectionery in Germany?

RQ_4: Which factors shape the German Gen Z's attitude towards the purchase intention of vegan chocolate confectionery?

Hence, this study aims to find actionable insights that will support marketers in placing their brand accordingly, and reacting to the expectations of the German Generation Z. This research does not cover an analysis of global vegan chocolate market trends or the wider impact of veganism across different demographic cohorts beyond Generation Z in Germany.

For the sake of better readability this thesis does not use both female and male forms – personal pronouns and nouns always refer to the female form as well.

2 THEORETICAL DISCUSSION

2.1 German Confectionery Market

Fast-Moving-Consumer-Goods (FMCG) are typically inexpensive, everyday items like food or household cleaning products. These products are generally used once or a few times and are usually sold in prepackaged forms (Steenis, 2019). German private household consumers have spent 198.97 billion Euros on food in 2022 (Statista, 2023a). The confectionery sector, encompasses chocolates and sweets, falling under the umbrella of the FMCG industry, which had a retail sales revenue of 650 billion Euros in Germany in 2023 (Statista, 2023a). The German confectionery industry is expected to generate revenues of roughly 17.72 billion Euros in 2024 and to grow annually by 4.16 percent (CAGR 2024-2028) (Statista, 2024a).

The products can be found almost everywhere, ranging from small kiosks and supermarkets to upscale department stores as well as online. Germans mention that the most common reason for confectionery consumption is ravenous appetite (Ahrens, 2021). Overall confectionery products in Germany appeal to a broad demographic, slightly leaning towards middle-aged and higher-income groups, but without a significant skew towards any gender (Statista, 2024a).

2.1.1 German Chocolate Confectionery Market

In the German market, chocolate confectionery represents a prominent segment within the confectionery industry. German consumers find chocolate products the most desirable among confectionery, followed by fine baked goods and sugar confectionery (Pawlik, 2021b). Therefore, as previously mentioned, this study emphasizes on the chocolate segment, which recorded a revenue of 7.47 billion Euros in Germany in 2023 with a growth of 7.02 percent compared to the previous year (Nielsen, 2024). Chocolate confectionery includes tablets, small bites, countlines, pralines, Easter, and Christmas chocolate – products manufactured from ingredients such as cocoa mass, sugar, cocoa butter, milk, and various spices.

It is anticipated that the individual volume in the chocolate confectionery market will average 6.1 kilograms in 2024 with an average revenue of 73.45 Euro per capita (Statista, 2024a). Regular consumption patterns reveal that approximately 35 percent of the German population consumes chocolate multiple times a week, and ten percent eat chocolate daily (Mintel, 2023). Brand preferences in the chocolate tablet category are led by Milka, Ritter Sport, and Lindt & Sprüngli (Pawlik, 2021a). Chocolate bars such as Duplo, Hanuta, Snickers, and Knoppers rank highly among consumer preferences (Pawlik, 2021b), while in the praline category, Toffifee is predominant, followed by Ferrero Küsschen, Mon Cheri, and Raffaello (Pawlik, 2021c).

2.1.2 Vegan Chocolate Confectionery in Germany

More than two thirds of the German consumers have already purchased substitute products, as the substitutes ease the avoidance of animal products (PwC & POSpulse, 2022). Based on an increasing demand, the German vegan confectionery sales amounted to 1.09 billion Euro in 2023 with an increase of 32.8 percent compared to 2022 (Ahrens, 2024). The vegan chocolate confectionery market in Germany grew with a sales value of 105.5 million Euros in 2023 (Nielsen, 2024), fueled by increasing health awareness, a growing vegan population looking for ethical and sustainable alternatives (Statista, 2023b). Therefore, manufacturers such as Alfred Ritter GmbH & Co. KG and Lindt & Sprüngli GmbH are innovating by introducing new products that cater to the tastes and dietary preferences of young consumers (Ritter Sport, 2016; Lindt & Sprüngli, 2023). This empirical study highlighting consumer's PI, does not go further into detail regarding the work of German chocolate brands, which may be the subject of future research. However, a launch and a product overview can be found in *Appendix A*.

According to GfK (2024) in 2023, vegan chocolate was bought by 7.5 million consumers, who on average made repeat purchases 49 times annually. It showcased a penetration rate of 11 percent. In contrast, regular chocolate holds a penetration of 80.6 percent with 54.9 million German consumers and a significantly higher repeat purchase rate of 87 times per year. Vegan chocolate is purchased by more female consumers (63 percent) compared to chocolate confectionery (55 percent) and consumed by mostly young consumers aged up to 39 years (GfK, 2024).

2.2 Generation Z

While many companies' attention has focused on the Millennials, the so-called Generation Z has arrived. Marketers are classifying consumers by their generations using the birth years, Gen Z respectively corresponds to the time frame of 1995 to 2010 (Dimock, 2019; Hoyer & Macinnis, 2010; Ismail et al., 2020). Due to the limitation of the generational cohort theory, definitions may vary between seven and ten years (Markert, 2004). Overall, Gen Z has grown in significance for brands, constituting 40 percent of global consumers as of 2020 (Amed et al., 2019). Gen Z is already changing the consumer landscape. Given the growing purchasing power of Generation Z (Dabija et al., 2019; Mondres, 2023; Priporas et al., 2017), their influence on the FMCG market is significant. Thus, it is essential to deepen the understanding of this generation (Jain et al., 2014).

Generation Z decides quickly, keeps up with the latest news, and is easily distracted (Francis & Hoefel, 2018). Ayten et al. (2019) indicate that Generation Z favors being online and continuously interacting. Gen Zers can be defined as realistic, responsible, determined, curious, and open-minded (Kleinschmit, 2019; Lifeway, 2018; Rickes, 2016; Seemiller & Grace, 2015).

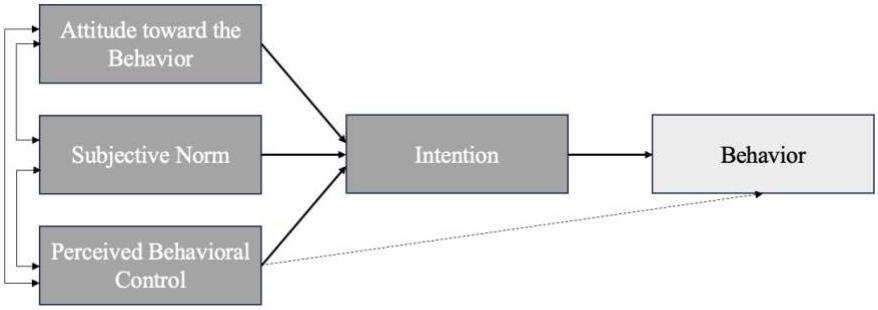
For Generation Z, it is essential to consider how they are being perceived by others (Autumn Fair, 2019), resulting in a major impact on their purchasing habits. Health, fitness, and mindfulness (Thach, 2019; Vennare, 2018) are leading Gen Z to pay more attention to the labeling of ingredients. Gen Z's purchasing criteria are more varied compared to older generations, encompassing not just primary factors but also secondary aspects like style, sustainability, uniqueness, and flexibility (Dabija & Bejan, 2017). They also place a higher value on a brand's ethical behavior (Saarelainen, 2021; Schroth, 2019). Known for their heightened environmental consciousness, Gen Z consumers are more inclined to invest in products that are pricier but align with ethical and environmental standards (Amed et al., 2019; Uddin & Khan, 2018). This trend extends to their food purchases (Dabija & Bejan, 2017; Saarelainen, 2021), where 29 percent of Gen Z consumers rank sustainability as one of their top purchasing criteria, a higher percentage than seen in older generations (OC&C, 2019).

Gen Z's dietary habits are influenced by the media. However, young consumers mainly follow their personal values and feelings. Approximately six percent of Germans aged between 20 and 29 follow a vegan diet and are therefore, the age group with the highest share of vegans (Wunsch, 2022). Looking at the top three vegan chocolate manufacturers Lindt, Ritter Sport, and Veganz, this age group also holds the largest purchase share. Considering regular chocolate, the consumers' age distribution corresponds with the population (GfK, 2024). Meeting the needs of Gen Z, which are identified by their desire for immediate gratification, represents a major challenge for confectionery marketing (Lebock & Florian, 2021).

2.3 Theory of Planned Behavior

Ajzen's (1985) TPB is an influential concept when studying human action as it is constructed to predict behavioral intentions and human behavior in certain situations (Hagger et al., 2002). It serves as a continuation of the Theory of Reasoned Action (TRA), which was constructed as an explanation of voluntary behavior in which respondents acted rationally by incorporating the available information and the possible outcome of their actions (Fishbein & Ajzen, 1975). Based on the limitation that TRA does not consider different factors affecting behavioral intention, thus not completely predicting human behavior, Ajzen (1991) introduced the TPB, illustrated in *Figure 1*.

Figure 1: *Theory of Planned Behavior.*



Note: Own illustration based on Ajzen, 1991.

Central to the TPB is the individual's intention (*Chapter 2.3.1*) to carry out a certain behavior (Ajzen, 1991). According to the TRA, the intention is shaped through one's attitude towards the behavior and SN (Ajzen, 1985). The TPB also incorporates PBC, which is the behavior over which consumers do not have complete volitional control (Ajzen, 1991). TRA suggests that people may intend to perform a behavior but can choose not to, due to obstacles like time or money, and overcoming these barriers is considered a prerequisite, whereas TPB accounts for the perceived difficulty of the action (Ajzen, 2002). The TPB is based on human behavior, which is driven by rational choices and can be shaped by attitudes (*Chapter 2.3.2*), SNs (*Chapter 2.3.3*), and PBC (*Chapter 2.3.4*) based on their impact on intention (Chen & Hung, 2016). Thus, humans tend to adopt behaviors when in their opinion these actions lead to positive outcomes, are socially acceptable and when they feel they have significant control over executing the behavior (Nguyen et al., 2017).

Significant differences between generations may be overlooked as research under the TPB considers consumers of different age groups to be homogenous (e.g., Nguyen et al, 2017). Studies have shown that results vary when generation is considered as a predictor of consumption behavior (e.g., Amoako et al., 2020). Thereby underscoring the influence of age on consumer behavior.

2.3.1 Purchase Intention

The intention to perform a specific behavior is central to the TPB (Ajzen, 1991). The author assumed that the intention reflects the motivation leading to behavior, therefore suggesting an increase in the likelihood of behavior with a stronger intention to perform an action. Due to the attitude-behavior gap the PI may not align with the actual behavior (Roberts, 1996). Therefore, discrepancies in the intention-behavior relationship arise because of changing intentions over time (Ajzen, 2005).

Using the TPB the PI has been examined within the context of organic food consumption (e.g., Chang & Chang, 2017; Ricci et al., 2018; Singh & Verma, 2017; Wee et al., 2014), fair-trade products (Beldad & Hegner, 2018; Lee et al., 2018; Shaw et al., 2000), and environmentally friendly purchase behavior (Ko, 2012; Wijekoon & Sabri, 2021). Wijekoon and Sabri (2021) highlight that TPB is the most used framework to explain green PI. In this thesis, the PI of vegan chocolate is evaluated. The following *Chapters 2.3.2-2.3.4* evaluate the different determinants of PI, extending Ajzen's (1991) TPB with several other factors in *Chapter 2.4*.

2.3.2 Attitude toward the Behavior

The attitude one has towards a certain behavior is crucial when deciding whether to pursue the action or not. The attitude towards a behavior is characterized by behavioral beliefs concerning the implications of that behavior (Ajzen, 2005). These behavioral beliefs connect the behavior to a specific attribute. The notion of attitude toward behavior relates to the extent to which a person has a positive or negative judgment toward the behavior. Particularly, the attributes that are linked to the behavior are positively or negatively evaluated (Ajzen, 1991).

This thesis intends to analyze how respondents evaluate purchasing vegan chocolate as vegan product consumers have a different attitude towards the environment, food, and health (Greenebaum, 2018). By improving the understanding of the attitudes of consumers towards the consumption of vegan chocolate products, consumer purchasing behavior could be clarified (Miguel et al., 2021). Taylor and Todd (1995) suggest decomposing the attitudinal belief structure into (1) perceived usefulness/relative advantage, (2) ease of use/complexity (Davis, 1989; Rogers, 1983), and (3) compatibility (Rogers, 1983) to reflect the underlying dimensions of attitude toward the behavior demonstrating that a decomposed TPB accounts for three percent more of the variance in behavioral intention compared to the traditional TPB. Due to the constraints of this thesis, the focus is specifically on behavioral beliefs allowing a detailed exploration within this scope.

Based on the TPB, attitude towards the intended behavior is the main determinant of the purchase intention (Armitage & Connor, 2001). Wijekoon and Sabri (2021) highlight that a positive attitude towards green-products does not always translate into actual behavior based on the previously mentioned green attitude-behavior gap (Groening et al., 2018; Park & Lin, 2020). It suggests that there is a discrepancy between the consumer's state of mind and his actual purchase/sustainability behavior (Gleim & Lawson, 2014). However, Jan et al. (2019) confirm a strong positive correlation between attitude and green PI. According to Miguel et al.

(2021) and Pandey et al. (2021) attitude has a direct impact on the PI of vegan products. Further, Sun et al. (2021) revealed that the likelihood of consumers buying environmentally friendly products increases if these products are perceived to contribute positively to the environment. The following hypothesis in the context of this study is derived:

H_1: A favorable attitude of German Generation Z toward purchasing vegan chocolate confectionery positively influences their purchase intention of vegan chocolate confectionery.

2.3.3 Subjective Norm

SN refers to "social pressure to perform or not to perform the behavior" (Ajzen, 1991, p. 188). Therefore, SN is a social factor that utilizes perceived social pressure to suggest actions that align with social expectations (ibid.). Armitage and Connor (2001) describe SN as "a person's beliefs about whether significant others think he or she should engage in the behavior" (p. 1431). Thus, one should demonstrate a specific behavior if the social expectation is that humans should demonstrate it and vice versa (Shah & Mohamed, 2011). Increasing social pressure is perceived by the consumer, the more significant others think that one should follow a certain behavior. The underlying prerequisites are normative beliefs (Ajzen, 2002). Taylor and Todd (1995) suggest decomposing the normative belief structure into relevant referent groups such as peers and superiors based on the findings of Burnkrant and Page (1988), Shimp and Kavas (1984), as well as Oliver and Bearden (1985), respectively to the decomposition of behavioral beliefs. Again, based on the constraints of this thesis, the focus is on normative beliefs to allow for a detailed exploration within this scope.

Scalco et al.'s (2017) meta-analysis on organic food consumption and Han & Stoel's (2015) study on socially responsible consumer behavior highlight the essential role of SN, ranking it as the second most significant factor influencing PI. Sharing this finding, Ham et al. (2015) and Kumar et al. (2017) stress the importance of considering SN when buying environmentally friendly food. However, according to Pandey et al. (2017), SN does not influence plant-based yogurt consumption intention. Whereas Contini et al. (2020) underlines the strong significant effect of SN on the PI of vegan convenience food, a finding supported by Sreen et al. (2018) with regards to green PI. The contradiction aligns with Ajzen's (1991) claim that the importance of each variable depends on the behavioral context. Based on previous research the following hypothesis in the context of this study can be derived:

H_2: A positive subjective norm positively influences the German Generation Z's purchase intention of vegan chocolate confectionery.

2.3.4 Perceived Behavioral Control

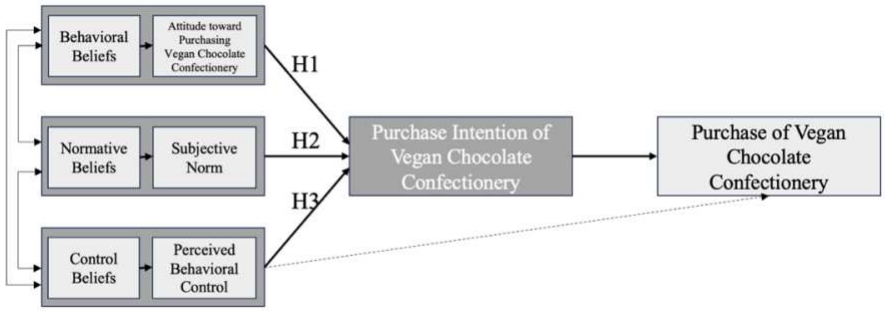
Consumers may have a positive attitude towards the behavior and feel social pressure to act this way, but many still do not purchase the products. The reason for this is that humans may not have the opportunity or the means to do so, indicating low PBC (Nguyen et al., 2017). Ajzen (1991) describes PBC as "perceived ease or difficulty of performing the behavior" (p. 188). Thus, PBC refers to the resources and opportunities needed to engage in a behavior. The concept can be viewed as dichotomous: (1) The essential resources for the action need to be available (i.e., money, time), and (2) The person's confidence in their ability to carry out the behavior (ibid.). Tanner and Kast (2003) as well as Barbarossa and De Pelsmacker (2014) highlight several perceived barriers with regards to environmentally responsible behavior: Cost, time, availability, and product labeling.

According to Han & Stoel (2015) PBC is the third most important factor predicting PI. Comparable results were observed in the related domain of organic PIs (Scalco et al., 2017). Concerning environmentally friendly purchases, PBC positively influences both PI and actual purchasing behavior (Kim & Chung, 2011; Yadav & Pathak, 2016). Particularly in the consumption of healthy foods, PBC has been found to have a significant influence (Ajzen, 2005). Based on previous research the following hypothesis in the context of this research can be stated:

H_3: Higher perceived behavioral control positively influences the German Generation Z's purchase intention of vegan chocolate confectionery.

Based on the TPB and the derived hypotheses in chapters *2.3.2-2.3.4* the following preliminary research model is proposed in *Figure 2*.

Figure 2*: Preliminary Research Model.*



Note: Own illustration based on Ajzen (2005, p. 126).

2.4 Extension of the Theory of Planned Behavior

The TPB model has been criticized when analyzing more complex behaviors (Armitage & Conner, 1998; Pandey et al., 2021). Therefore, many researchers (e.g., Contini et al., 2020; Lorenz et al., 2015, Sniehotta et al., 2014; Sreen et al., 2018) suggest extending the TPB to enhance the predictive power of the model, which aligns with Ajzen (1991). It is essential to understand the influencing factors of behavior, thus how the individual's attitude is shaped (Ajzen & Fishbein, 1980). Based on prior research on environmentally and socially responsible behavior as well as plant-based dietary choices, additional variables are included in the context of this study to enhance the understanding of attitude and PI (e.g., Dean, et al., 2012; Hartmann & Apaolaza Ibáñez, 2012; Polonsky et al., 2012). The inclusion of health awareness (*Chapter 2.4.1*), environmental concerns (*Chapter 2.4.2*), animal welfare (*Chapter 2.4.3*), social influence (*Chapter 2.4.4*) (Miguel et al., 2021), environmental knowledge (*Chapter 2.4.5*) (Indriani et al., 2019), self-image (*Chapter 2.4.6*) (Lasuin & Ching, 2014) and environmental self-identity (*Chapter 2.4.7*) (Cook et al., 2002) should increase the explained variance, based on the idea of closing the gap in explaining why people choose to be vegan.

2.4.1 Health Awareness

Health awareness, also known as health consciousness (Gould, 1990), is associated with motivation for preventive health measures. It can be characterized as the "degree to which consumers are interested in their health and motivated to engage in preventive behaviors" (Mai & Hoffman, 2015, p. 63). Healthy attitudes and behaviors are predicted by health awareness (Chen, 2009; Yadav & Pathak, 2016), which is linked to health information strongly determining attitudes towards a specific product (Gould, 1990). Hence, individuals link a healthy lifestyle to a healthy diet (Bryant, 2019; Sualakamala & Huffman, 2010). However, chocolate is considered as "unhealthy" (Prestwich et al., 2011), and previous research has found limited influence of health aspects on PI (Bradu et al., 2013; Kozelová et al., 2014). Nevertheless, research has identified health awareness as the strongest motivator to follow a vegan diet (Dyett et al., 2013; Janssen et al., 2016; Radnitz et al., 2015). Based on previous research (Mai & Hoffmann, 2012; Miguel et al., 2022; Teng & Lu, 2016; Yadav & Pathak, 2016; Wescombe, 2019) the following hypothesis is tested in the context of attitude towards PI and PI of the German Generation Z as well as vegan chocolate:

H_{4a}: German Generation Z's health awareness has a positive influence on attitude toward their purchase intention of vegan chocolate confectionery.

H_{4b}: German Generation Z's health awareness has a positive influence on their purchase intention of vegan chocolate confectionery.

2.4.2 Environmental Concern

Environmental concern is characterized as an attitude toward protecting the environment (e.g., Kinnear et al., 1974; Minton & Rose, 1997) or a general attitude toward the environment (e.g., Crosby et al., 1981; Mostafa, 2007). Mainieri et al. (1997) as well as Tanner and Kast (2003) suggest that individuals with positive attitudes towards the environment are inclined to follow a behavior which reflects those attitudes. In general, individuals with a greater concern for the environment tend to be inclined to change their attitude and adopt an environmentally friendly lifestyle (Wang et al., 2017). Janssen et al. (2016) state that environmental motives are a main driver for a vegan diet.

According to Hartmann and Apaolaza-Ibáñez (2012), Koenig-Lewis et al. (2014), Pagiaslis and Krontalis (2014) as well as Yadav and Pathak (2016) environmental concern can predict green purchase behavior and PI. Extending this finding to vegan consumption, Miguel et al. (2021) demonstrate that environmental concern also influences attitudes towards vegan diets, following the idea of Konuk et al. (2015) that environmental interests demonstrate to be highly relevant to consumer attitudes as well as behavior. Therefore, following hypotheses are formed:

H_{5a}: German Generation Z's environmental concern has a positive influence on attitude toward their purchase intention of vegan chocolate confectionery.

H_{5b}: German Generation Z's environmental concern has a positive influence on their purchase intention of vegan chocolate confectionery.

2.4.3 Animal Welfare

Animal welfare can be defined by focusing on physical wellbeing and living conditions of the animals (Broom, 1991; Kiley-Worthington, 1989), or by emphasizing personal empathy through the emotional responses to animal treatment (Cembalo et al., 2016; Dawkins, 2006). Harper and Makatouni (2002) claim that animal welfare is a key motivator to purchase organic products, due to the increasing importance in terms of ethical consumption (Schröder & McEachern, 2004).

The concern for animal welfare is linked to vegan consumption, in which no animal products are consumed. Dyett et al. (2013) and Janssen et al. (2016) identified animal welfare concerns

as a main reason to follow a vegan diet. Most research has focused on the willingness-to-pay (Elbakidze & Nayga, 2012; Lagerkvist & Hess, 2011; La Lama et al., 2017) or attitudes toward animal welfare friendly products (Cembalo et al., 2016; Clark et al., 2016; Padel & Foster, 2005). Lee et al. (2016), Stringer et al. (2020), and Wee et al. (2014) reveal a significant impact of animal welfare on PI in various domains. Miguel et al. (2021) goes beyond this finding, as the authors uncover animal welfare as one of the main influencing factors of PI of vegan products. Based on the previous findings and suggestions, the following hypotheses are proposed in the context of this study:

H_{6a}: German Generation Z's high concern for animal welfare positively influences their attitude toward purchasing vegan chocolate confectionery.

H_{6b}: German Generation Z's high concern for animal welfare positively influences their purchase intention of vegan chocolate confectionery.

2.4.4 Social Influence

If a person's lifestyle, actions, and interests change the way others behave and result in changes to their actions in the presence of others, this is considered social influence (Markowski & Roxburgh, 2019). This influence, which can arise without direct contact, interferes with principles, attitudes, and norms (Tan & Ooi, 2018) affecting the consumer's purchase (Ishibashia & Yada, 2019). Several studies highlight the impact of social influence on behavior (e.g., Burnkrant & Cousineau, 1975; Pincus & Waters, 1977). Seyfang (2006) asserts that social influence affects consumers' decisions and behavior, thus also their attitude towards veganism. The following hypotheses are formed:

H_{7a}: Social influence among German Generation Z has a positive impact on their attitude toward purchasing vegan chocolate confectionery.

H_{7b}: Social influence among German Generation Z has a positive impact on their purchase intention of vegan chocolate confectionery.

2.4.5 Product Knowledge

Product knowledge consists of the total amount of information retained in the consumer's memory concerning the product category and rules (Philippe & Ngobo, 1999). It represents a key determinant of consumers' environmentally friendly purchasing behavior (Cho et al., 2013; McEachern & Warnaby, 2008). Lin (2009) and Wikoff et al. (2012) state that consumers can

recognize green product benefits in saving resources and energy with increasing knowledge and information in comparison to non-green products of similar quality. Consequently, increasing the consumer's understanding of the benefits of environmentally friendly products is essential for fostering positive attitudes towards sustainable consumption and influencing consumers' intentions to make environmentally friendly choices (Sun & Wang, 2019). Based on these findings, the following hypotheses are drawn:

H_{8a}: German Generation Z's product knowledge positively affects their attitude toward purchasing vegan chocolate confectionery.

H_{8b}: German Generation Z's product knowledge positively affects their intention to purchase vegan chocolate confectionery.

2.4.6 Self-Image Congruence

Self-image congruence influences consumer's motivation to purchase by activating and implementing the motive of self-consistency. This means a consumer has the need to act in a way which is consistent with his self-perception (Sirgy, 1985). Subsequently, a consumer is inclined to purchase a product if the typical consumer's image of a product is consistent with one or more of a person's self-images (Shin et al., 2016). As environmental issues grow in importance, consumers may tend to express their self-image through the pro-environmental products they purchase (Oliver & Lee, 2010; Sparks & Shepherd, 1992).

Sparks and Shepherd (1992) discover that a consumer's self-identity positively influences their PI of organic food. Lee (2008) also highlights environmental self-image as a factor of purchase behavior concerning young consumers. Nguyen and Nguyen (2020) replicate those findings for millennials. Drawing on the above arguments, the following hypothesis for vegan chocolate and Generation Z can be proposed:

H_9: German Generation Z's self-image congruence with vegan consumers has a positive impact on their purchase intention of vegan chocolate confectionery.

2.4.7 Environmental Self-Identity

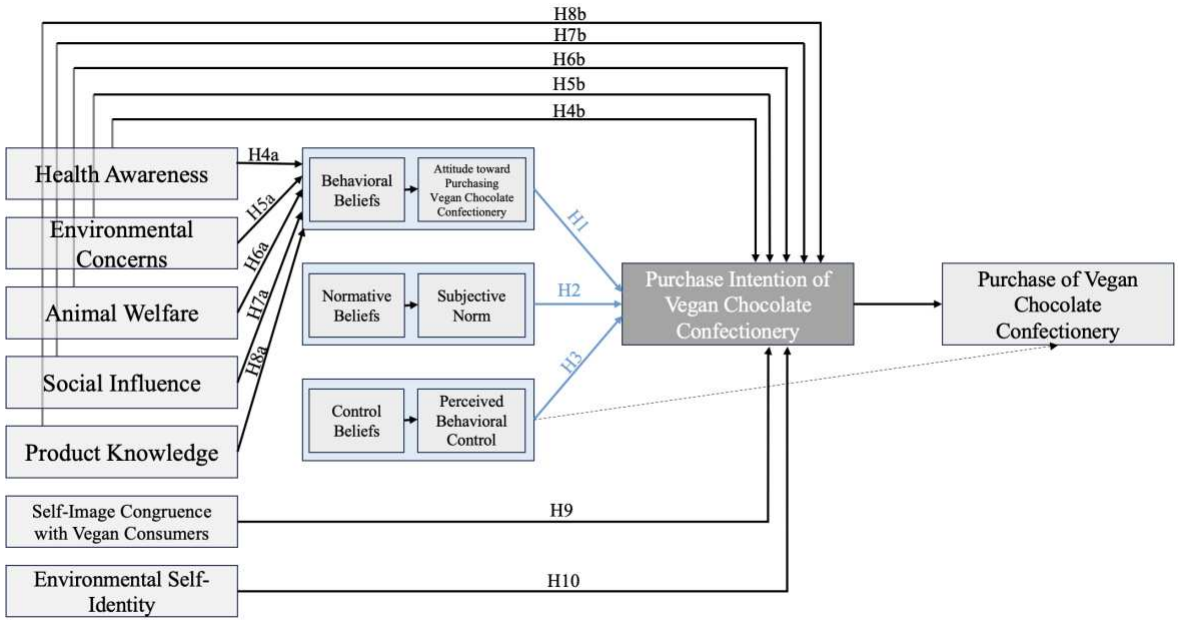
Environmental self-identity concentrates on the extent to which a person sees themselves as environmentally friendly (Van der Werff et al., 2014). While the concepts of self-image congruence and environmental self-identity are related, they refer to different aspects of people's self-perceptions and how these perceptions influence their behavior (Conner &

Armitage, 1998). Schultz and Tabanico (2007) define environmental identity as the degree to which the natural environment shapes human's views of the world and how they behave towards it. It has also been found that environmental self-identity influences the respective behavior (Cook et al., 2002; Nigbur et al., 2010; Schultz & Tabanico, 2007; Whitmarsh & O'Neill, 2010). A person is likely to behave environmentally conscious, if they see themselves as environmentally friendly (Van der Werff et al., 2013). Thus, the following hypothesis is drawn:

H_{10}: German Generation Z's environmental self-identity positively affects their intention to purchase vegan chocolate confectionery.

In the context of this study, the applied research model, illustrated in *Figure 3*, is based on the derived hypotheses.

Figure 3: *Research Model.*



Note: Own illustration. The original TPB is highlighted in blue.

3 METHODOLOGY

3.1 Qualitative Research

An initial exploratory qualitative research was employed to gather first insights and provide valuable information for the subsequent quantitative questionnaire (Creswell, 2013). The qualitative research is intended to elaborate on whether the variables[1] influencing the attitude towards PI of vegan chocolate as well as the determinants[2] of PI derived from literature capture a broad view or additional factors need to be added.

3.1.1 Research Instrument and Sampling Method

Eight individual semi-structured online in-depth interviews were conducted (n_{male}=4; n_{female}=4), which are personal conversations with a single participant to elaborate on and discover underlying beliefs, motivations, feelings, and attitudes towards chocolate alternatives (Malhotra et al., 2020). Due to the possibility of social norm influences in focus groups, this approach was favored (Zikmund, 1997).

The participants were recruited with a purposive sampling method (Creswell & Clark, 2017) through social media, utilizing a non-probability sampling technique implying that the probability of being included in the sample is known (Burns et al., 2017). This approach guarantees a suitable sample based on the research objective, as it enables researchers to select participants based on their characteristics (i.e., belonging to German Gen Z, non-/vegan diet). All respondents belonged to Generation Z and included vegan and non-vegan men as well as females. The overall structure of the interviews is illustrated in *Table 1*.

Table 1: *Qualitative Research: In-depth Interview Structure.*

Section	Topic
1	General Opinion towards Veganism and Substitute Products
2	(Determinants of) Attitude towards Vegan Chocolate
3	Determinants of Purchase Intention of Vegan Chocolate

The in-depth interview guide can be found in *Appendix B*. All interviews, lasting between 20 and 30 minutes, were fully transcribed. The summarized version is available in *Appendix C*. Mayring's (2014) content analysis was used to analyze the gathered data.

[1] health awareness, environmental concern, animal welfare, social influence, product knowledge
[2] attitude, SN, PBC, health awareness, environmental concern, animal welfare, social influence, product knowledge, self-image congruence, environmental self-identity

3.1.2 Exploratory Research Findings

The qualitative study of the attitudes and behaviors of Generation Z in terms of veganism and in particular vegan chocolate showed a variety of insights reflecting individual's motivations and beliefs. The respondents held different attitudes towards veganism based on personal experiences (I1, I6, I7), upbringing (I3, I5), social circles (I2, I4), and environmental awareness (I2, I5). Due to health concerns (I1), environmental beliefs (I2, I5), animal well-being (I2, I4, I6), or ethical values (I5, I6) various respondents supported the lifestyle. Others expressed hesitation or favored a non-vegan diet because of taste preferences (I3, I4, I8) or cultural norms (I4). The participants expressed various levels of awareness and familiarity regarding vegan substitute products. While some had a broad knowledge of the availability and variety of vegan alternatives, others demonstrated limited knowledge or were skeptical.

Determinants of Purchase Intention of Vegan Chocolate

A positive attitude towards veganism as well as vegan chocolate seems to have a direct effect on the willingness to purchase vegan chocolate (I2, I5, I6), suggesting that individuals with a favorable opinion towards vegan chocolate are more likely to buy vegan products (H_1). Interview two highlights the impact of social relationships when adopting a vegan diet, thus SN can also impact the PI in line with H_2. The role of PBC is also shown in I2, indicating that having access to the necessary resources and the ease of acquiring vegan products improves the likelihood of purchasing vegan chocolate supporting H_3.

Health awareness can positively influence the PI validating H_{4b} as I1's adoption of a vegan diet due to health recommendations from a doctor indicates. Environmental concerns (I2, I5) prove to be a strong driver for purchasing decisions, which supports H_{5b}. Although animal welfare concerns are relevant (I4, I6), it appears as if they have a more varied influence on PIs, which partially supports H_{6b}. A change of behavior in the presence of others can be observed in I2, thus, social influence may shape PI, confirming H_{7b}. As I5 and I7 demonstrate, a positive understanding of the product influences the PI of vegan chocolate supporting H_{8b}. The lack of evidence regarding the influence of self-image congruence on PI suggests that H_9 may not be universally applied to German Generation Z. The personal value system of interviewee two, including environmental protection and animal welfare, indicates that an ecological self-image can have a positive effect on PI, which corresponds with H_{10}.

Determinants of Attitude Towards Vegan Chocolate

The respondents (I1, I2, I5, I6) indicated a range of factors influencing their attitude towards vegan chocolate such as health considerations (H_{4a}), environmental concerns (H_{5a}), and animal well-being (H_{6a}). The research supports H_{7a} because according to I2, I4, I6 social influence through social circles impacts the attitude towards vegan chocolate. Moreover, a comprehensive understanding of the product plays a crucial role in forming an attitude towards vegan chocolate as highlighted in I5 and I7 aligning with H_{8a}. Consequently, this shows that various factors shape the attitude of individuals towards vegan chocolate. However, this research has also not revealed any additional factors complementing the previous determinants identified in the literature review.

3.1.3 Implications for Quantitative Research

Note that these are preliminary results solely based on qualitative data from a small sample. A quantitative study follows to confirm the initial derived hypotheses, which were partially supported by the qualitative research. Due to the constraints of the small sample size, all initial hypotheses have been retained for further examination in the subsequent quantitative study. To maintain consistency, the sampling strategy will replicate that of the qualitative research, thus German Generation Z. This approach will help to statistically validate the initial hypotheses with a larger sample. Additionally, due to the different levels of knowledge concerning vegan diets, a definition of veganism must be added to the questionnaire ensuring a standardized understanding.

3.2 Quantitative Research

The quantitative research aims to statistically test the extent to which the factors shown in ***Error! Reference source not found.*** *(Chapter 2.4.7)* influence German Generation Z's attitude as well as the PI of vegan chocolate to obtain a more comprehensive understanding of the behaviors of Generation Z.

3.2.1 Hypotheses and Research Model

This study's applied research model is displayed in ***Error! Reference source not found.***. The variables are divided into independent variables (IVs) and dependent variables (DVs). Based on the research model and the literature review in *Chapter 2*, the following hypotheses, outlined in *Table 2*, are derived.

Table 2: *Overview of Hypotheses.*

Hypotheses	
Effects on Purchase Intention of Vegan Chocolate Confectionery	
H_1	A favorable **attitude** of German Generation Z toward purchasing vegan chocolate confectionery positively influences their **purchase intention** of vegan chocolate confectionery.
H_2	A positive **subjective norm** positively influences the German Generation Z's **purchase intention** of vegan chocolate confectionery.
H_3	Higher **perceived behavioral control** positively influences the German Generation Z's **purchase intention** of vegan chocolate confectionery.
H_{4b}	German Generation Z's **health awareness** has a positive influence on their **purchase intention** of vegan chocolate confectionery.
H_{5b}	German Generation Z's **environmental concern** has a positive influence on their **purchase intention** of vegan chocolate confectionery.
H_{6b}	German Generation Z's high concern for **animal welfare** positively influences their **purchase intention** of vegan chocolate confectionery.
H_{7b}	**Social influence** among German Generation Z has a positive impact on their **purchase intention** of vegan chocolate confectionery.
H_{8b}	German Generation Z's **product knowledge** positively affects their **purchase intention** vegan chocolate confectionery.
H_9	German Generation Z's **self-image congruence**, with vegan consumers, has a positive impact on their **purchase intention** of vegan chocolate confectionery.
H_{10}	German Generation Z's **environmental self-identity** positively affects their **purchase intention** vegan chocolate confectionery.
Effects on Attitude towards Purchasing Vegan Chocolate Confectionery	
H_{4a}	German Generation Z's **health awareness** has a positive influence on **attitude** toward their purchase intention of vegan chocolate confectionery.
H_{5a}	German Generation Z's **environmental concern** has a positive influence on **attitude** toward their purchase intention of vegan chocolate confectionery.
H_{6a}	German Generation Z's high concern for **animal welfare** positively influences their **attitude** toward purchasing vegan chocolate confectionery.
H_{7a}	**Social influence** among German Generation Z has a positive impact on their **attitudes** toward purchasing vegan chocolate confectionery.
H_{8a}	German Generation Z's **product knowledge** positively affects their **attitude** toward purchasing vegan chocolate confectionery.

3.2.2 Research Instrument and Sampling Method

A standardized online questionnaire is utilized as research instrument for the quantitative research to investigate different consumer attitudes and behaviors (Vomberg & Klarmann, 2022). Online surveys are cost-effective, flexible with design possibilities, and time-efficient with a high data accuracy, data quality, and a low interviewer bias (Albers et al., 2009; Burns et al., 2017). However, the data quality might suffer because participants are not enabled to

raise questions regarding comprehension (Vomberg & Klarmann, 2022). For the creation and anonymous data collection, Qualtrics was used, allowing respondents to access and complete the survey on their own time. Although there can be a high drop-out rate, a large sample size can be generated (ibid.). To increase the probability of obtaining a complete data set, all questions were labeled as obligatory questions requiring respondents to answer them. The option of screener questions was used to ensure that the respondents met the criteria of this study, i.e. belonging to Generation Z and being German. In addition, an attention question was asked to assess the respondents' concentration and awareness while completing the survey. To prevent sequence effects, the item's sequence was randomized for all constructs.

The survey was structured as illustrated in *Table 3*. In *Appendix E* the questionnaire and in *Appendix F* the coding plan can be viewed. A pre-test (n=5), examining the type and quality of the measurement instruments, their suitability for the questions, their comprehensibility and manageability (Langusch, 2004; Schrader, 1990), was applied to refine the questionnaire.

Table 3: *Quantitative Research: Questionnaire Structure.*

Section	Topic
1	Screener Questions: Age, Nationality
2	Constructs
3	Drivers and Barriers of Purchasing Vegan Chocolate
4	Demographics

This research utilized a non-probability sampling method in the form of convenience and snowball sampling (Burns et al., 2017), implying that the participants were recruited through social media and the online research platform SurveyCircle. Additionally, friends and acquaintances were able to share the survey link with others. The method's advantages of time and cost-effectiveness, come with the disadvantage that the sample is not representative of the population (ibid.).

The online survey was opened by 361 participants, after evaluating completeness, screener questions (age, nationality) as well as the attention check, 272 valid responses were identified and used for hypotheses testing. The statistical literature indicates to gain 15 to 20 respondents per IV (Franck et al., 2018). There are ten IVs in this thesis causing an expectation of 150 to 200 respondents. Having a final sample of 272 fulfills this rule of thumb. The final sample profile is explained more deeply in *Chapter 4.1*.

The statistics program SPSS by IBM was used to analyze the gathered data. For all analyses, a significance level of $\alpha = 0.05$ is applied.

3.2.3 Measurement

The utilized variable constructs were adapted from previous relevant literature for the cause of this thesis using a 7-point Likert scale according to Ajzen's (1985) suggestion. Ajzen (2005) recommends asking respondents directly with regards to behavior implementation to close the intention behavior gap. The Likert scale is considered interval scaled in this study, assuming an equal distance between the interval scores (Cleff, 2015). All constructs used are displayed in *Table 4,* in *Appendix D* more details are given.

Table 4: *Overview of Constructs.*

Constructs	
Purchase Intention (PI) **PI_1:** I would be likely to purchase vegan chocolate confectionery. **PI_2:** I would be willing to buy vegan chocolate confectionery. **PI_3:** I would likely make vegan chocolate confectionery one of my first choices in this product category. **PI_4:** I would exert a great deal of effort to purchase vegan chocolate confectionery. **PI_5:** I intend to purchase vegan chocolate confectionery.	Nystrand and Olsen (2020); Todd & Taylor (1995); White et al. (2012)
Attitude towards Purchasing vegan Chocolate Confectionery (ATP) **ATP_1:** I like the idea of buying vegan chocolate confectionery. **ATP_2:** I love to purchase vegan chocolate confectionery items rather than buying conventional chocolate products if I have an option. **ATP_3:** I always like to buy vegan chocolate confectionery. **ATP_4:** I would like to buy confectionery products that are cultivated through animal free process. **ATP_5:** I have a positive attitude towards buying vegan chocolate confectionery.	Sultan & Wong (2019); Todd & Taylor (1995)
Subjective Norm (SN) **SN_1:** Most of the people I care about think I should buy vegan chocolate confectionery. **SN_2:** The people in my life, whose opinions I value, would approve if I buy vegan chocolate confectionery. **SN_3:** Most of the people, who I care about, buy vegan chocolate confectionery. **SN_4:** The people in my life whose opinions I value advise me to buy vegan chocolate confectionery. **SN_5:** People those are important to me believe I should buy vegan chocolate confectionery.	Ajzen (2006); Choi & Johnson (2019)
Perceived Behavioral Control (PBC) **PBC_1:** The decision to buy vegan chocolate confectionery is entirely up to me. **PBC_2:** I am sure that if I want, I can buy vegan chocolate confectionery. **PBC_3:** I have enough money to buy vegan chocolate confectionery. **PBC_4:** I have enough time to buy vegan chocolate confectionery. **PBC_5:** I have enough knowledge to buy vegan chocolate confectionery.	Khare (2015); Kim et al. (2013); Todd & Taylor (1995); Prakash & Pathak (2017)
Health Awareness (HA) **HA_1:** I think about my health. **HA_2:** I am aware of changes in my health. **HA_3:** I tend to be informed about my health. **HA_4:** I have responsibility for the state of my health. **HA_5:** I monitor my health status daily.	Teng & Lu (2016)
Environmental Concern (EC)	Mostafa (2009)

EC_1: The balance of nature is very delicate and can be easily changed. **EC_2:** Human beings, when they interfere with nature, often cause disastrous consequences. **EC_3:** Human beings must live in harmony with nature to survive. **EC_4:** Humanity is abusing the environment. **EC_5:** Humanity was not created to dominate the rest of nature.	
Animal Welfare (AW) **AW_1:** Animals must be kept in their natural habitat. **AW_2:** It is important for animals to behave naturally. **AW_3:** I care about the welfare of animals. **AW_4:** Animals must not suffer. **AW_5:** Companies must think about their profits, but also about animals.	Graaf et al. (2016)
Social Influence (SI) **SI_1:** My friends often recommend me vegan chocolate. **SI_2:** My friends usually go shopping for vegan chocolate with me. **SI_3:** My friends often share their experiences about vegan chocolate with me. **SI_4:** My friends often share their knowledge about vegan chocolate with me.	Varshneya et al. (2017)
Product Knowledge (PK) **PK_1:** I am very familiar with vegan chocolate confectionery. **PK_2:** When I go shopping, I frequently see vegan chocolate confectionery in shopping venues. **PK_3:** I often learn about vegan chocolate confectionery through articles or news. **PK_4:** I know a lot about vegan chocolate confectionery.	Sun & Wang (2019)
Self-Image Congruence with vegan consumers (SIC) **SIC_1:** The image of the vegan consumer is similar to how I am. **SIC_2:** The image of the vegan consumer is similar to how I see myself. **SIC_3:** The image of the vegan consumer is similar to how others believe who I am. **SIC_4:** The image of the vegan consumer is similar to how others see me.	Nguyen & Nguyen (2020)
Environmental Self-Image (ESI) **ESI_1:** Acting environmentally-friendly is an important part of who I am. **ESI_2:** I am the type of person who acts environmentally-friendly. **ESI_3:** I see myself as an environmentally-friendly person.	Van der Werff et al. (2013)

4 RESEARCH RESULTS

4.1 Sample Profile

Based on the final sample profile, the German respondents are aged between 14 and 29, with an average of 23.35 years and the majority being female (72.8%). Concerning the participants' occupations, most of them are university students (76.1%), followed by 20.2 percent who are employed. The respondents mostly have a high school diploma (50.7%) or a realschule degree (33.5%), which can be grouped under secondary school qualifications. Bachelor's degrees are held by 12.9 percent and most people (57.0%) occasionally follow a vegan diet. *Table 5* highlights the demographic differences among respondents based on their vegan diet.

Table 5: *Sample Profile of Survey Respondents by Frequency of Following a Vegan Diet.*

	Never *(n=68)*	**Sometimes** *(n=155)*	**Often** *(n=40)*	**Always** *(n=9)*	**All** *(n=272)*
Gender					
Male	39.7%	26.5%	12.5%	11.1%	27.2%
Female	60.3%	73.5%	87.5%	88.9%	72.8%
Age	*M=23.04*	*M=23.55*	*M=23.38*	*M=22.11*	*M=23.35*
Education					
Realschul diploma	1.5%	1.3%	2.5%	11.1%	1.8%
Highschool diploma	35.3%	29.7%	35.0%	77.8%	33.5%
Bachelor's degree	42.6%	56.1%	52.5%	11.1%	50.7%
Master's degree	17.6%	12.3%	10.0%	-	12.9%
None (so far)	2.9%	0.6%	-	-	1.1%
Occupation					
High School Student	4.4%	1.9%	-	11.1%	2.6%
University Student	60.3%	80.0%	85.0%	88.9%	76.1%
Apprentice	1.5%	-	2.5%	-	0.7%
Employed	32.4%	18.1%	12.5%	-	20.2%
Self-Employed	1.5%	-	-	-	0.4%

While the proportion of male respondents declines with increasing vegan diet frequency, the percentage of female respondents increases correspondingly. Educational levels as well as occupation also vary among different frequencies, implying that young, recently graduated high-school students are more inclined to adopt a vegan diet.

4.1.1 Barriers to Purchase Vegan Chocolate Confectionery

A thematic analysis approach was used to examine the German Gen Z's barriers to purchase vegan chocolate (Braun & Clarke, 2006). A word cloud was used as a first point of reference (*Appendix G*). Recurring themes were explored in each response to identify common concerns. Thus, the following thematic areas were identified: Price concerns, taste preferences, habit and familiarity, availability issues, specific preferences, health concerns, environmental concerns,

psychological barriers, as well as quality and ingredients. Through a systematic coding process, all responses were assigned to specific topics, resulting in a "1" (for presence) or "0" (for absence) within the respective thematic category.

Overall, taste is an essential factor influencing chocolate consumption (Lybeck et al., 2006; Thaichon et al., 2017). In this research, taste preference was mentioned most often as a barrier to purchase vegan chocolate (42%). Implying, that consumers believe healthy food has to compromise on taste (Raghunathan et al., 2006), including chocolate consumption (De Pelsmaeker et al., 2017). As a second barrier price concerns (37%) were mentioned, indicating that cost is an essential barrier as respondents consider vegan chocolate as too expensive compared to non-vegan alternatives. The responses are summarized in *Appendix G*.

4.1.2 Drivers to Purchase Vegan Chocolate Confectionery

A second thematic analysis was conducted to analyze German Gen Z's drivers to purchase vegan chocolate. The same process as in *Chapter 4.1.1* was repeated, and following categories were identified: Environmental concerns, animal welfare, health reasons, taste and quality, personal values and ethical reasons, social and gift giving, curiosity and trial as well as economic and accessibility factors. The main motivations for buying vegan chocolate among German Gen Z are related to environmental (28%) and animal welfare (23%) concerns, corresponding with this study's research model (*Chapter 3.2.1*). For a fifth of the respondents, flavor and quality of the product are also vital. The responses are displayed in *Appendix G*.

4.2 Reliability and Validity of Measurement

The validity of the constructs, shown in ***Error! Reference source not found.***, is tested with eleven principal component analyses with varimax rotation. Based on each Kaiser-Meyer-Olkin (KMO) criterion – all scoring above 0.5 – the data is suitable for the factor analyses (Cleff, 2015; Field, 2013; Hartas, 2010). Each principal component analysis also holds a significant Bartlett's Test of Sphericity (Franck et al., 2018). Subsequently, each construct can be summarized as one variable, besides PBC, which is defined by two variables. The factor loading and the average variance extracted (AVE) were investigated to proof convergent validity ranging between 0.534 and 0.890 (Fornell & Larcker, 1981). The factor loadings ranging from 0.65 to 0.96 are above the suggestion of 0.6 (Chin et al., 1997). Cronbach's alpha is utilized for the reliability analysis of each construct. According to Mat Nawi et al. (2020), all internal consistency values are at least good. *Table 6* illustrates the reliability and validity of each construct.

Table 6: *Reliability and Validity.*

Constructs	Factor loading	Cronbach's α	C.R.	AVE	KMO	Bartlett's Test of Sphericity
Purchase Intention (PI)						
PI_1	0.857	0.871	0.912	0.676	0.779	p<0.001
PI_2	0.874					
PI_3	0.833					
PI_4	0.692					
PI_5	0.841					
Attitude towards Purchasing vegan Chocolate Confectionery (ATP)						
ATP_1	0.836	0.865	0.903	0.653	0.793	p<0.001
ATP_2	0.881					
ATP_3	0.759					
ATP_4	0.827					
ATP_5	0.727					
Subjective Norm (SN)						
SN_1	0.889	0.923	0.942	0.766	0.863	p<0.001
SN_2	0.808					
SN_3	0.849					
SN_4	0.915					
SN_5	0.911					
Perceived Behavioral Control (PBC)						
PBC_1	0.740	0.797	0.863	0.612	0.746	p<0.001
PBC_2	0.805					
PBC_3	0.778					
PBC_4	0.805					
PBC_5*	0.731		0.534	0.534		
Health Awareness (HA)						
HA_1	0.835	0.841	0.894	0.629	0.831	p<0.001
HA_2	0.826					
HA_3	0.885					
HA_4	0.652					
HA_5	0.747					
Environmental Concern (EC)						
EC_1	0.808	0.867	0.907	0.660	0.859	p<0.001
EC_2	0.852					
EC_3	0.820					
EC_4	0.838					
EC_5	0.741					
Animal Welfare (AW)						
AW_1	0.832	0.882	0.915	0.683	0.809	p<0.001
AW_2	0.862					
AW_3	0.854					
AW_4	0.830					
AW_5	0.748					
Social Influence (SI)						
SI_1	0.881	0.917	0.942	0.802	0.808	p<0.001
SI_2	0.861					
SI_3	0.920					
SI_4	0.918					

Product Knowledge (PK)						
PK_1	0.838	0.754	0.845	0.579	0.629	p<0.001
PK_2	0.732					
PK_3	0.656					
PK_4	0.805					
Self-Image Congruence with vegan consumers (SIC)						
SIC_1	0.933	0.959	0.970	0.890	0.839	p<0.001
SIC_2	0.944					
SIC_3	0.956					
SIC_4	0.940					
Environmental Self-Image (ESI)						
ESI_1	0.903	0.907	0.943	0.847	0.737	p<0.001
ESI_2	0.943					
ESI_3	0.915					

Note: *PBC was separated into two factors with (1) PBC_1, PBC_2, PBC_3, PBC_4 and (2) PBC_5

Brown (2015) suggests a factor correlation below 0.8 for adequate discriminant validity, which is illustrated in *Table 7*. According to Chin et al. (1997) to provide discriminant validity the construct's square root of AVE must be larger than its correlation values.

Table 7: *Correlation between the Constructs (Discriminant Validity).*

	PI	ATP	SN	PBC(1)	PBC(2)	HA	EC	AW	SI	PK	SIC	ESI
PI	***0.822***											
ATP	0.765**	***0.808***										
SN	0.499**	0.608**	***0.875***									
PBC(1)	0.064	0.000	-0.130*	***0.782***								
PBC(2)	0.298**	0.379**	0.227**	0.000	***0.731***							
HA	0.203**	0.273**	0.159**	0.195**	0.248**	***0.793***						
EC	0.410**	0.454**	0.254**	0.304**	0.177**	0.355**	***0.813***					
AW	0.451**	0.465**	0.204**	0.317**	0.161**	0.305**	0.614**	***0.826***				
SI	0.435**	0.472**	0.670**	-0.241**	0.172**	-0.018	0.168**	0.159**	***0.895***			
PK	0.492**	0.525**	0.468**	-0.108	0.456**	0.207**	0.161**	0.193**	0.516**	***0.761***		
SIC	0.498**	0.533**	0.495**	-0.125*	0.241**	0.166**	0.222**	0.291**	0.472**	0.478**	***0.943***	
ESI	0.325**	0.390**	0.270**	0.170**	0.226**	0.383**	0.333**	0.436**	0.194**	0.296**	0.448**	***0.920***

Note: Significant at *p<0.05 and **p<0.01 The bold and italic diagonal values illustrate the square root of AVE.

Summarizing, adequate (convergent and discriminant) validity and reliability of the theoretical model are given.

4.3 Effects on Purchase Intention of Vegan Chocolate Confectionery

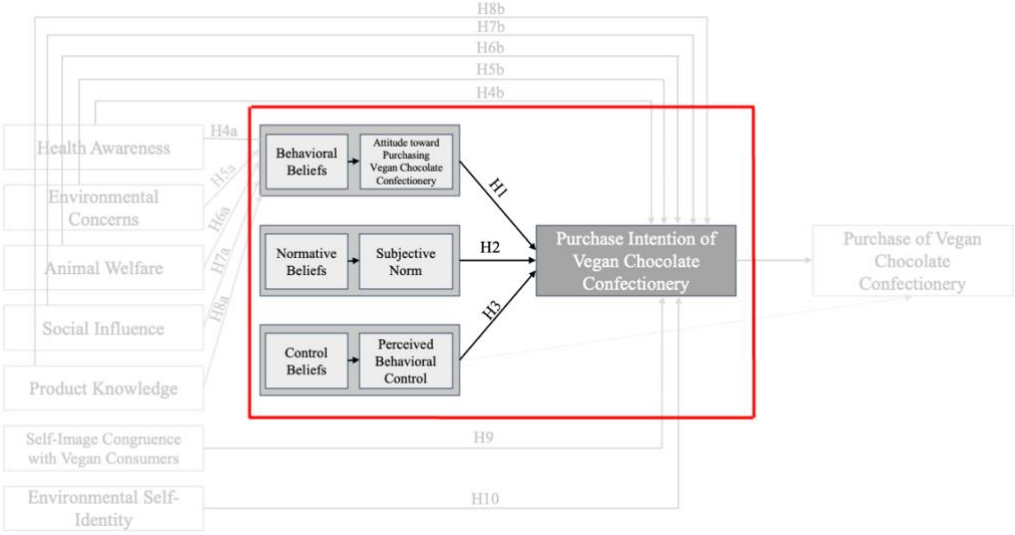
This chapter considers the effects on PI of vegan chocolate analyzing hypotheses H_1, H_2, H_3, H_{4b}, H_{5b}, H_{6b}, H_{7b}, H_{8b}, H_9 and H_{10} (*Chapter 4.3*). The original model is analyzed in *Chapter 4.3.1*, followed by the extended model in *Chapter 4.3.2*. Afterwards, the effects on attitude

towards purchasing vegan chocolate are examined with hypotheses H_{4a}, H_{5a}, H_{6a}, H_{7a}, and H_{8a} (*Chapter 4.4*).

4.3.1 Theory of Planned Behavior

Ajzen's (1985) TPB is the foundation of this study. Therefore, a regression of the fundamental model analyzing the influence of attitude towards PI of vegan chocolate, SN and PBC on the DV PI of vegan chocolate was conducted as starting point, which is illustrated in *Figure 4*.

Figure 4*: Effects on Purchase Intention of Vegan Chocolate Confectionery – TPB: ATP, SN, PBC on PI.*



Note: Own illustration.

The regression model, fully displayed in *Appendix H*, is statistically significant (p_1<0.001) with an adjusted R^2 of 0.587, implying that 58.7 percent of the variance of PI can be explained by at least one factor. Only attitude towards PI of vegan chocolate is statistically significant (p_2<0.001) as illustrated in *Table 8*. Thus, H_1 is statistically proven and the attitude towards PI of vegan chocolate significantly (strongly) positively affects German Generation Z's PI of vegan chocolate. This result reflects previous findings (Ajzen, 1991; Miguel et al., 2021; Jan et al., 2019), emphasizing attitudinal direct influence on PIs, in relation to eco-friendly or vegan products.

Table 8*: Regression Analysis – TPB: ATP, SN, PBC on PI.*

TPB: ATP, SN, PBC → PI						
	adjusted R^2	F	p_1	β	t	p_2
Model	0.587	97.177	<0.001			
ATP				0.720	13.840	**<0.001**
SN				0.068	1.369	0.172
PBC (1)				0.073	1.855	0.065
PBC (2)				0.010	0.234	0.815

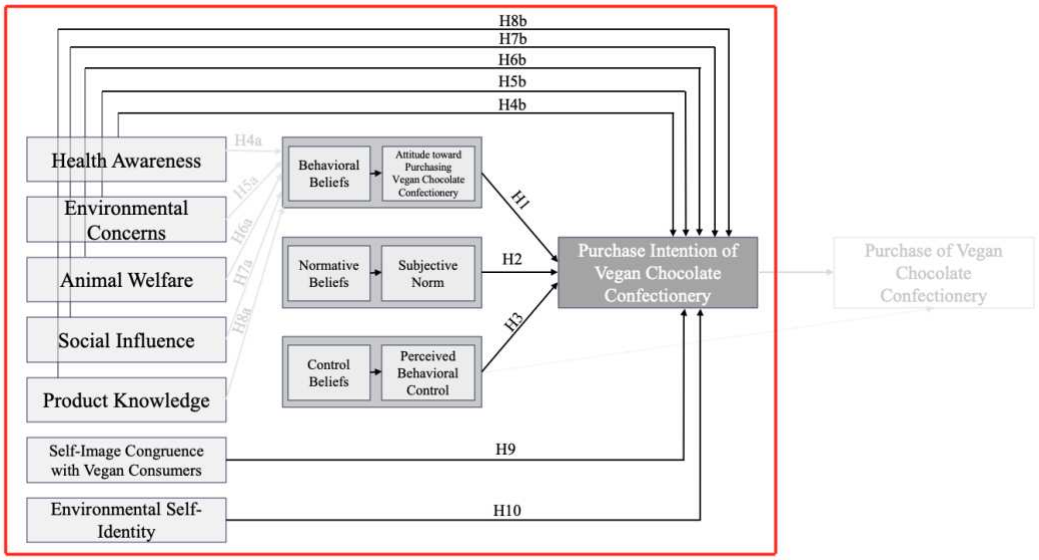
Human behavior cannot be entirely captured by linear relationships, therefore this study aims to identify potential synergies between attitude towards PI of vegan chocolate, SN, and PBC influencing the PI of vegan chocolate by introducing six two-way interactions. The refined statistically significant (p_1<0.001) regression model, which can be found in *Appendix I*, displays improved explanatory power by 1.9 percent with an adjusted R^2 of 0.606. Attitude towards PI of vegan chocolate continues to be statistically significant (p_2<0.001). SN (p_2=0.023), PBC (1) (p_2=0.019) and the interaction between attitude and SN (p_2<0.001) are also statistically significant. Thus, H_1, H_2, and H_3 are statistically proven.

Consistent with the literature, attitude towards the purchase of vegan chocolate is the strongest predictor of PI among German Generation Z (β = 0.709) (Ajzen, 1991; Jan et al., 2019; Miguel et al., 2021; Pandey et al., 2021). Followed by SN (β = 0.117), thus with increasing SN, the German Gen Z's PI of vegan chocolate increases. PBC positively influences PI (β = 0.094), implying that with an increasing feeling of control, PI grows. The significant role of SN and PBC aligns with hypotheses derived from the literature emphasizing the importance of social influences and individual control in purchase decisions (*Chapter 2.3.3* and *Chapter 2.3.4*). Lastly, the negative standardized coefficient of the interaction between attitude and SN (β = -0.154) suggests that the positive influence of attitude on PI decreases when the influence of SNs increases, or vice versa. The interaction might capture Groening et al. (2018) and Park and Lin's (2020) discussion of the nuanced green attitude-green behavior gap, where social expectations potentially blur individual beliefs in decision-making scenarios.

4.3.2 Extension of the Theory of Planned Behavior

Given that the consumption of vegan chocolate is based on various reasons, it is essential to extend the model to include health awareness, environmental concern, animal welfare, social influence, product knowledge, self-image congruence and environmental self-identity as mentioned in *Chapter 2.4*. The model to be examined is illustrated in *Figure 5*.

Figure 5: *Effects on Purchase Intention of Vegan Chocolate Confectionery – Extended TPB: ATP, SN, PBC, HA, EC, AW, SI, PK, SIC, ESI on PI.*



Note: Own illustration.

The extended regression model, which is fully enclosed in *Appendix J*, is statistically significant (p_1<0.001) with an adjusted R^2 of 0.609, implying that 60.9 percent of the variance of PIs can be explained by at least one factor. The extension is in accordance with Miguel et al. (2021) suggesting that the inclusion of additional variables increases the explained variance of purchase. Attitude towards PI of vegan chocolate (p_2<0.001), product knowledge (p_2=0.031), and self-image congruence (p_2=0.040) are statistically significant. *Table 9* illustrates that H_1, H_{8b}, and H_9 are statistically proven, implying that H_2 and H_3 are no longer significant when the model is extended. Reasons for this occurrence are provided in *Chapter 5.1*.

Table 9: *Regression Analysis – Extended TPB: ATP, SN, PBC, HA, EC, AW, SI, PK, SIC, ESI on PI.*

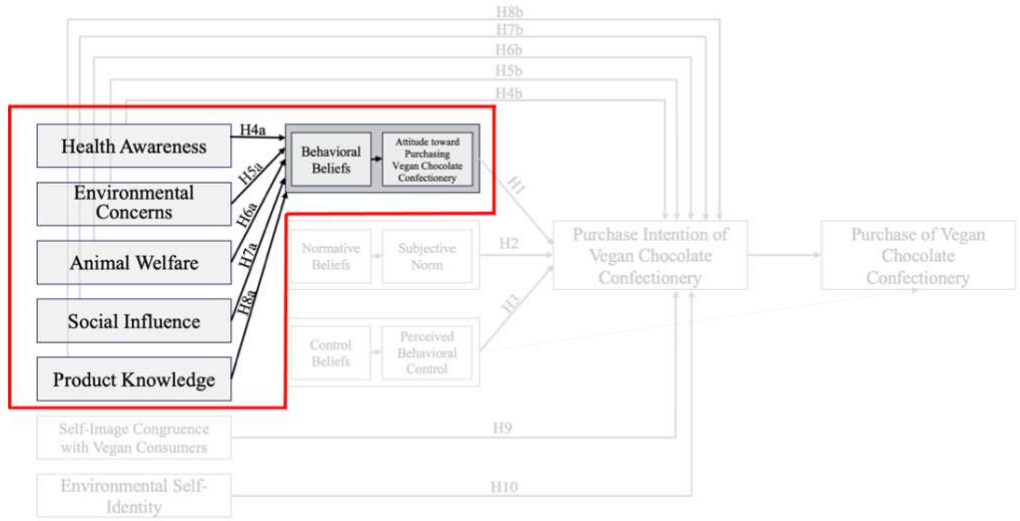
Extended TPB: ATP, SN, PBC, HA, EC, AW, SI, PK, SIC, ESI → PI						
	adjusted R^2	F	p_1	β	t	p_2
Model	0.609	39.359	<0.001			
ATP				0.599	10.025	**<0.001**
SN				-0.005	-0.078	0.938
PBC (1)				0.075	1.727	0.085
PBC (2)				-0.017	-0.384	0.701
HA				-0.034	-0.757	0.450
EC				0.034	0.658	0.511
AW				0.102	1.913	0.057
SI				0.056	0.972	0.332
PK				0.114	2.167	**0.031**
SIC				0.105	2.060	**0.040**
ESI				-0.051	-1.065	0.288

Considering that human behavior cannot be captured by linear relationships, 55 two-way interactions, shown in *Appendix K,* should be introduced. However, then Franck et al.'s (2018) rule of thumb requesting 15 to 20 respondents per IV is no longer fulfilled.

4.4 Effects on Attitude towards Purchasing Vegan Chocolate Confectionery

The attitude, one has towards a certain behavior, is crucial when deciding whether to pursue the action or not. Consequently, it is essential to understand which factors influence the attitude, thus health awareness, environmental concerns, animal welfare, social influence and product knowledge are examined, which are displayed in *Figure 6*.

Figure 6: *Effects on Attitude towards Purchasing Vegan Chocolate Confectionery. HA, EC, AW, SI, PK on ATP.*



Note: Own illustration.

The regression model, attached in *Appendix L*, is statistically significant (p_1<0.001) with an adjusted R^2 of 0.482. This means 48.2 percent of the variance in attitude towards purchasing vegan chocolate can be explained by at least one factor. Environmental concern (p_2<0.001), animal welfare (p_2<0.001), social influence (p_2<0.001) and product knowledge (p_2<0.001) are statistically significant, therefore, positively influence attitudes towards purchasing vegan chocolate. Thus, H_{5a}, H_{6a}, H_{7a}, and H_{8a} are statistically proven (see *Table 10*).

Table 10: *Regression Analysis – HA, EC, AW, SI, PK on ATP.*

HA, EC, AW, SI, PK → ATP						
	adjusted R^2	F	p_1	β	t	p_2
Model	0.482	51.533	<0.001			
HA				0.075	1.538	0.125
EC				0.202	3.532	**<0.001**
AW				0.220	3.929	**<0.001**
SI				0.246	4.701	**<0.001**
PK				0.307	5.819	**<0.001**

By introducing ten two-way interactions this thesis thrives to identify potential synergies between the factors influencing attitude. The refined statistically significant (p_1<0.001) regression model, enclosed in *Appendix M*, displays improved explanatory power by 0.9 percent with an adjusted R^2 of 0.491. H_{5a}, H_{6a}, H_{7a}, and H_{8a} continue to be statistically proven and no additional IV significantly influence attitude towards purchasing vegan chocolate. Consistent with the literature, environmental concern (β = 0.231) and animal welfare (β = 0.276) are strong predictors of positive attitudes towards the purchase of vegan chocolate among German Generation Z (*Chapter 2.4.2* and *Chapter 2.4.3*). The significant positive effect of social influence (β = 0.207) on attitudes is coherent with academia, underlining the role of social norms and peer influence in shaping consumer behavior (*Chapter 2.4.4*). Product knowledge (β = 0.333) is the strongest predictor of German Generation Z's attitude towards purchasing vegan chocolate, implying a well-informed consumer is more likely to develop a positive attitude towards purchasing vegan chocolate. Detailed interpretations of the results can be found in *Chapter 5.1*.

4.5 Demographical Influences

To assess the demographical influences of vegan consumption habits, gender, age, occupation, and education within the research model, various multigroup analyses were conducted. The analyses of gender show significant differences of the influence of IVs on DVs, which aligns with previous research (Modlinska et al., 2020). Within the original TPB model male respondents revealed a significant influence of attitude as well as the interaction of attitude and SN on the PI illustrated in *Table 11*. Whereas, among female respondents, attitude, SN, PBC and the interaction of attitude and SN have a significant effect on their PI. This suggests that SN and PBC are more impactful in shaping females' PI towards vegan chocolate.

Table 11: *Multigroup Analysis: TPB: ATP, SN, PBC → PI.*

Multigroup Analysis: TPB: ATP, SN, PBC → PI			
	adjusted R^2=0.521	adjusted R^2=0.615	adjusted R^2=0.606
	Male (n=74)	**Female (n=198)**	**All (n=272)**
ATP	<0.001	<0.001	<0.001
SN	NS	0.027	0.023
PBC (1)	NS	0.026	0.019
ATP*SN	0.017	0.014	0.002

Note: Only significant IVs are displayed.

A similar pattern was revealed in the extended model displayed in *Table 12* as well, in which animal welfare, product knowledge, and self-image congruence specifically influence PI among female consumers. This suggests that ethical considerations and informed decision-making are

crucial for female consumers. Moreover, female consumers who identify with the vegan lifestyle are more likely to have a higher PI, compared to male consumers.

Table 12: *Multigroup Analysis: Extended TPB: ATP, SN, PBC, HA, EC, AW, SI, PK, SIC, ESI → PI.*

Multigroup Analysis: Extended TPB: ATP, SN, PBC, HA, EC, AW, SI, PK, SIC, ESI → PI			
	adjusted R^2=0.521	adjusted R^2=0.614	adjusted R^2=0.609
	Male (n=74)	**Female (n=198)**	**All (n=272)**
ATP	<0.001	<0.001	<0.001
AW	NS	0.023	NS
PK	NS	0.049	0.031
SIC	NS	0.045	0.04

Note: Only significant IVs are displayed.

A comparable behavior can be observed in the analysis of attitude shown in *Table 13*. Environmental concern and product knowledge positively influence both genders' attitudes towards purchasing vegan chocolate. However, social influence and animal welfare play a vital role in shaping female attitudes.

Table 13: *Multigroup Analysis: HA, EC, AW, SI, PK → ATP.*

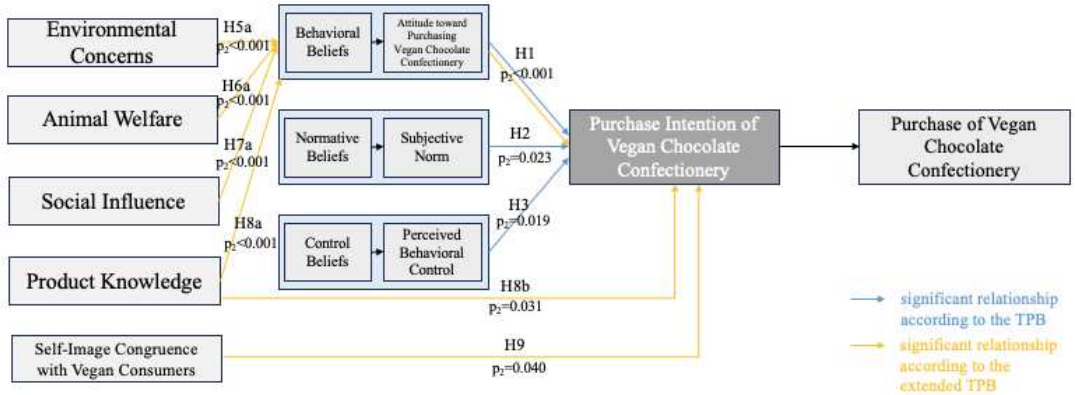
Multigroup Analysis: HA, EC, AW, SI, PK → ATP			
	adjusted R^2=0.307	adjusted R^2=0.562	adjusted R^2=0.482
	Male (n=74)	**Female (n=198)**	**All (n=272)**
EC	0.01	0.01	<0.001
AW	NS	<0.001	<0.002
SI	NS	0.01	<0.003
PK	0.041	<0.001	<0.004

Note: Only significant IVs are displayed.

4.6 Final Research Model

The findings of the analyses are summarized in the final research model displayed in *Figure 7*. Only the significant relationships with the corresponding p-values are illustrated.

Figure 7: *Final Research Model.*



Note: Own illustration.

5 GENERAL DISCUSSION

5.1 Research Findings and Reflection

This research aims to counteract the lack of research in the field of vegan chocolate, particularly within Generation Z in Germany. Although the field of plant-based substitutes seems to have promising potential, research in this field has focused on exploratory motives behind the avoidance of animal products (e.g., Hodson & Earle, 2018; Marangon et al., 2016) and consumption of vegan products (e.g., D'Souza et al., 2022; Ploll & Stern, 2020). Consequently, by extending the TPB, Generation Z's PI of vegan chocolate as well as attitude towards purchase are investigated to address the research problem.

Starting with answering RQ_1, German Gen Z mentions taste preferences and price concerns as barriers, expressing that vegan chocolate does not meet their taste expectations and they consider vegan chocolate as too expensive compared to conventional chocolate (*Chapter 4.1.1*). This insight is vital for marketers who intend to increase the appeal of vegan chocolate and it aligns with previous findings that healthier food options are perceived as less tasty (Kearney & McElhone, 1999; Raghunathan et al., 2006). On the contrary in response to RQ_2, the main drivers for purchasing vegan chocolate among German Gen Z are related to environmental and animal welfare concerns (*Chapter 4.1.2*), aligning with the values of Generation Z emphasizing ethical consumption (Amed et al., 2019; Dabija & Bejan, 2017).

Clarifying RQ_3 and solely considering the original framework of the TPB – attitude towards purchasing vegan chocolate (H_1), SN (H_2), and PBC (H_3) significantly influence German Gen Z's PI of vegan chocolate (*Chapter 4.3.1*). This aligns with Ajzen's (1985) TPB and Nguyen et al. (2017), implying that PIs are shaped by Gen Z's belief in positive outcomes, social acceptance, and control over their actions. Attitude towards PI of vegan chocolate is found to be the strongest predictor, signaling the direct influence of positive attitudes towards PI. Additionally, the PI of vegan chocolate increases, if one is surrounded by people who consider the consumption of vegan chocolate to be important. As PBC represents the level to which an individual feels able to purchase vegan chocolate, it indicates that a higher perceived ease or ability (i.e., money, time, knowledge) to purchase vegan chocolate increases PI. SN and PBC are more impactful in shaping females' PI towards vegan chocolate, corresponding to the gender skewness of vegan consumption.

Considering the extended framework of the TPB, attitude towards purchasing vegan chocolate (H_1), product knowledge (H_{8b}), and self-image congruence with vegan consumers (H_9)

significantly influence PI of vegan chocolate (*Chapter 4.3.2*). This underlines that German Generation Z, in particular women, values informed decision-making. Consumers' PI increases, when they are aware of the benefits and characteristics of vegan chocolate. Self-image congruence indicates that those who see themselves as part of the vegan community or align with their values are more inclined to buy vegan chocolate. Especially, female consumers who identify with the vegan lifestyle are more likely to have a higher PI, compared to male consumers. The shift in significant predictors of PI within the extended TPB model, particularly the prevalence of product knowledge and self-image congruence over the traditional factors (i.e., SN, PBC) can be interpreted through the lens of Generation Z's unique consumer behavior. The implementation of ethical consumption variables may overshadow traditional predictors, due to their direct relevance to the consumer's personal values and informed decision-making processes.

Continuing with RQ_4, it is essential to understand how attitudes towards PI are formed, based on the role of attitude as the strongest predictor of PI. There is consistency between the research results of this study and prior research (*Chapter 4.4*). Environmental concern (H_{5a}), animal welfare (H_{6a}), social influence (H_{7a}), and product knowledge (H_{8a}) positively influence attitudes towards purchasing vegan chocolate. These insights imply that consumers, who are concerned about the environment as well as animal welfare, have a more favorable attitude towards PI of vegan chocolate. Moreover, if peers value vegan chocolate, a Gen Zer's attitude towards purchasing vegan chocolate is positively impacted, due to the significant influence of social influence on attitude. Social influence and animal welfare play a vital role in shaping female attitudes. Product knowledge proved to be the main factor among both genders, revealing that greater vegan chocolate product knowledge promotes a positive attitude and encourages PI. The health awareness of German Gen Zers showed no significant influence on the attitude towards buying vegan chocolate, which aligns with Miguel et al.'s (2021) finding. This finding could indicate that the health aspect of vegan indulgence products such as chocolate is not as relevant compared to other vegan products. This underlines a possible unique angle of consumer behavior to the confectionery segment, where indulgence may overshadow health concerns even among health-conscious consumers. Alternatively, the non-existent relationship between health awareness and attitude could indicate that vegan chocolate is not necessarily healthier in the eyes of the German Generation Z.

All in all, eight hypotheses can be supported through various multiple linear regression analyses (***Error! Reference source not found.***). This research contributes to a better understanding of

what determines German Gen Z's PI of vegan chocolate and how it can be influenced. In the following chapters, managerial implications, limitations, and future research opportunities are proposed.

5.2 Managerial Implications

The results of this study provide marketing, brand, and product managers important guidelines with regard to the influence of attitude towards purchasing, SN, and PBC on the German Generation Z's PI of vegan chocolate. Transforming the findings into actionable insights necessitates a marketing strategy to target potential consumers and turn them into customers, as the chocolate alternatives market is expected to grow and Generation Z's purchasing power increases. In the following section, the insights will be underpinned using the marketing mix of the 4Ps: Product, place, promotion, and price. Price is not considered in this marketing mix because willingness-to-pay was not evaluated in this research.

Product

Considering the product within the marketing mix, the findings are clustered into intrinsic and extrinsic product attributes. Intrinsic characteristics relate to the product's internal properties. For vegan chocolate manufacturers in Germany, it is important that they work on flavors that Generation Z will enjoy. It is essential to build on traditional flavors and at the same time extend them, based on this study's insight indicating the need for taste that meet Gen Z's expectations. Extrinsic attributes are the external dimensions of the product such as packaging, branding, and labelling. These are of fundamental importance due to the consumer's impulsive buying behavior regarding chocolate. Within seconds, the consumer in front of the crowded confectionery shelf decides which product to buy. Based on the significant aspects of environmental concern and animal welfare, it is important not only to appeal to the consumer visually, but also to ensure transparent labelling concerning sourcing or ethical practices (e.g., Fair Trade, Rainforest Alliance). Moreover, as well-informed consumers are more likely to have a positive attitude towards vegan chocolate, chocolate manufacturers must provide the relevant information so that a consumer feels knowledgeable. In the long-term eco-friendly packaging reducing waste could be an additional selling point based on the significant effect of German Generation Z's environmental concern.

Place

In terms of place, vegan chocolate manufacturers need to ensure an omnichannel presence in the short term, by being available online as well as in physical stores to provide a seamless

shopping experience. In Germany, this encompasses the retailers Edeka Group, Rewe, RTG, and the Schwarz Group. However, brands must think beyond traditional structures by being where Generation Z is. Consequently, products should also be in places such as lifestyle and vegan-focused stores to increase visibility. This study's findings concerning social influence recommend placing products where peer recommendations are likely. In general, it is essential that vegan chocolate manufacturers invest in a memorable and shareable shopping experience utilizing urban installations as well as pop-up stores which align with the overall product and brand strategy, leveraging PBC and social influence.

Promotion

Concerning promotion, vegan chocolate companies need to educate consumers about vegan chocolate in terms of product benefits and ethical aspects in the short term with a well-thought out 360° marketing campaign. Social media platforms, which are favored by Gen Z such as TikTok and Instagram should be leveraged, and collaborations with micro-influencers who align with the brand values created. This study emphasizes the role of social influence, thus micro-influencers are favored based on their personal impact compared to macro influencers. At the same time the marketers must convince the consumers to try the chocolate with the help of samples, as Generation Z still needs to be convinced of the flavor of vegan chocolate. Sampling can address the previously mentioned taste barriers. Due to the nature of vegan chocolate, cause related marketing should also be integrated by donating a portion of profits to sustainability projects. These projects need to align with the brand values and can range from planting trees to local community projects. Giveaways, couponing, and co-branding should also not be neglected. In the long-run Generation Z could be included in product innovation and design, as part of a promotion to make the brand more relatable and to create interactivity.

5.3 Limitations and Future Research

The interpretation of the results of this study is influenced by several limitations. The restrictions arise from the constraints of the research approach used. This study's sampling methods do not permit a transfer of the results to the population. Consequently, the findings cannot be generalized to German consumers belonging to Gen Z. Future research should strive to capture a broad cross-section of the German population. Sociodemographic characteristics of survey takers, for example, age, occupation, and gender, should be evenly represented. Participation in the study was voluntary, thus the results of the study might be biased by self-selection, i.e. individuals with a certain attitude might have been more motivated to respond,

leading to an overrepresentation of equally minded people in the sample and falsifying the results.

To avoid any individual brand preference biases, no visual representations of chocolate were used. This partially resulted in the absence of a realistic shopping experience. Therefore, sensory stimuli (e.g., sight, smell, touch), which are prominent while shopping and influence consumer behavior, are neglected. Future studies should portray a realistic shopping experience for consumers, meaning Gen Zers have the possibility to identify vegan chocolate in a real-life environment. This could be done in a qualitative study (i.e. observations), allowing all respondents the same experience. Additionally, the different point-of-sale touchpoints of a vegan chocolate (e.g. shelf, displays) could be assessed. Moreover, the aspect of German Gen Z's willingness-to-pay could be covered.

Although attitude was identified as a significant predictor of PI, the potential role of attitude as a mediator was not investigated due to the scope of this study. This exploration may provide deeper insights into the indirect influence of variables on PI. A further limitation refers to the constructs used to explain the variance in PI and attitude towards purchase (*Chapter 3.2.3*). While the items increased the variance explained, there are additional constructs identified in the literature which could potentially further increase the variance explained such as environmental knowledge (Yadav & Pathak, 2016), involvement with vegan products (Miguel et al., 2021) and brand credibility (Wijekoon & Sabri, 2021). The possibility of a discrepancy between attitude and behavior represents a considerable limitation (Park & Lin, 2020). If respondents express a preference for buying vegan chocolate, it does not necessarily result in an actual purchasing behavior. This attitude-behavior gap could be addressed more explicitly in future studies by investigating whether PI leads to actual behavior.

5.4 Conclusion

People all over the world consume chocolate. To cater for different tastes, preferences and ethical considerations, such as veganism, the product is constantly changing. Veganism, for example, is increasingly gaining appeal as more and more consumers choose a vegan diet and steer away from traditional animal products. Reflecting this development, eight percent of the 633,652 tones of confectionery sold in Germany in 2023 were vegan (LZ, 2023). This study aimed to elaborate on the determinants of Gen Z's PI of vegan chocolate within the German market, due to the growing dominance of Gen Z.

This research revealed the critical role of positive attitudes, social influences, and perceived behavioral control in shaping the PI of vegan chocolate. By extending the TPB, this study revealed that product knowledge and self-image congruence also positively influence PI, whereas the attitude towards PI of vegan chocolate can be swayed through environmental concern, animal welfare, social influence, and product knowledge.

Further research is recommended to gain more insights in the context of German Generation Z's purchase intention of vegan chocolate in Germany. Nevertheless, this master thesis provides a first guidance for professionals either in research or business. By considering the previously mentioned dimensions of the four Ps, chocolate manufacturers will enhance their market position and ensure long-term sustainability in the highly competitive confectionery market.

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7 APPENDIX

Appendix A: Vegan Chocolate in Germany Launch Overview

In 2016, **Ritter Sport** launched as first high-volume manufacturer two vegan chocolate bars (Ritter Sport, 2016), acknowledging the changing dietary preferences towards more sustainable and plant-based options. Since then, the portfolio has been continuously expanded and the vegan portfolio has reached a sales value of 6.9 million Euros in 2023 (Nielsen, 2024).

Ritter Sport's first vegan chocolate bars in 2016	Ritter Sport's vegan chocolate bars launched since
	

In November 2020, **Lindt** also launched vegan chocolate under the HELLO brand. HELLO vegan was launched with three variants based on oat drink powder, appealing to vegans, vegetarians, flexitarians, as well as people who are lactose intolerant or allergic to milk protein. One year later, the first vegan chocolate Santa was introduced by Lindt after winning the PETA Vegan Food Award for the best vegan chocolate (Lindt & Sprüngli, 2023). In 2023 Lindt & Sprüngli held the highest share of sales with 7.6 million Euros in the German vegan chocolate market after private label (Nielsen, 2024). **Nestlé**, launched a vegan KitKat in 2022 responding to the evolving consumer demand and pressing social media requests (Mosecker, 2021). By 2023 Nestlé achieved a sales value of 1.9 million Euros (Nielsen, 2024).

Lind HELLO vegan range	Other vegan chocolate
	

Various other smaller businesses such as Veganz, Koro, Share Foods, The Nu Company and Tonys Chocolonely, have also entered the vegan chocolate market, which is equivalent to 1.41 percent of the entire chocolate market.

However, not all known manufacturers follow the trend by introducing new vegan chocolate. **Mondelēz** has taken a different stance with its Milka brand. Emphasizing the importance of Alpenmilch, a central ingredient for over 120 years, the company acknowledges the role of this ingredient in producing the creamy chocolate that consumers know and love. While recognizing the consumer shift towards plant-based alternatives and respecting the choice some make for vegan products, Mondelēz intends to continue captivating consumers with its signature creamy chocolate (Milka, n.d.).

Appendix B: In-depth Interview Guide

Introduction: Hello [x], thank you for your time and for agreeing to talk with me today regarding my master thesis at Católica Lisbon School of Business and Economics. I am Dominique and I am currently conducting a research regarding veganism in Germany among Generation Z. There are no right or wrong answers, I am solely interested in your personal opinion. Before we begin, I would like to assure you that all the information you provide will be kept confidential and used only for academic research purposes. Your identity will remain anonymous throughout the study's findings. The interview will last about 20 to 25 minutes.

Do you have any questions about the study, or anything else before we get started?

Part 1: General Opinion Towards Veganism and Substitute Products

1. What is your point of view towards veganism? (opinion / feelings / etc.)
2. What are your thoughts about the vegan lifestyle and its impact on health, environment, and animal welfare?
3. How do you feel towards vegan substitute products?
4. Are you aware of vegan substitute products available in the market? (product category, etc.)
5. What is your opinion on these products in terms of quality, taste, variety, and accessibility?

Part 2: (Determinants of) Attitude Towards Vegan Chocolate

<u>Attitude Towards Vegan Chocolate</u>

1. Have you ever thought about vegan chocolate?
2. How do you feel about vegan chocolate confectionery?
3. Do you have any experiences with vegan chocolate which you would like to share?
4. When/Where/How do you typically purchase chocolate / vegan chocolate?

<u>Determinants of Attitude Towards Vegan Chocolate</u>

1. What factors shape your attitude towards vegan chocolate?
2. *Direct Questions if a factor has not been previously mentioned:*
    a. *Health Awareness*: How do health concerns associated with vegan chocolate influence your attitude towards it?
    b. *Environmental Concern*: Does your environmental concern affect your attitude towards vegan chocolate over non-vegan options?
    c. *Animal Welfare*: Does animal welfare shape your attitude towards vegan chocolate confectionery?
    d. *Social Influence*: Can you describe what your social circle (friends, family, social media) thinks about vegan chocolate? Does their opinion / viewpoint shape your attitude towards vegan chocolate?
    e. *Product Knowledge*: Do you feel that you have enough information about vegan chocolate to make an informed purchase decision? In which ways influences this knowledge (or lack thereof) your attitude?

Part 3: Determinants of Purchase Intention of Vegan Chocolate

1. Based on our previous discussion about your attitudes towards vegan chocolate, how likely are you to purchase vegan chocolate in the future?
2. What specific factors are most likely to influence this decision to purchase (or not to purchase) vegan chocolate?
3. *Direct questions if a factor has not been previously mentioned:*

a. *Health Awareness*: How do health considerations affect your decision to purchase vegan chocolate?
b. *Environmental Concern*: How do environmental concerns affect your decision to purchase vegan chocolate? (How important is the environmental impact of food production in your purchase decisions?)
c. *Animal Welfare*: How does animal welfare affect your decision to purchase vegan chocolate? (Do you generally consider animal welfare in your food choices?)
d. *Social Influence:* How does the presence of others (e.g., family, friends) affect your decision to purchase vegan chocolate?
e. *Product Knowledge:* Does your knowledge regarding products affect your decision making to buy vegan chocolate?
f. *Self-Image Congruence*: Do you think the image of a vegan consumer is similar to how you are? Does this perception of a vegan consumer affect your decision to purchase vegan chocolate?
g. *Environmental Self-Identity*: Do you see yourself as an environmentally-friendly person? Does this perception of being environmentally-friendly affect your decision to purchase vegan chocolate?
h. *Attitude towards Vegan Chocolate*: Do you think your attitude towards vegan chocolate affects your decision to purchase vegan chocolate?
i. *Subjective Norm*: Do most of the people, you care about, think you should buy vegan chocolate confectionery? Does their opinion affect your decision to purchase vegan chocolate?
j. *Perceived Behavioral Belief*: Is the decision to buy vegan chocolate entirely up to you? Do you think you have the resources (e.g., time, money) to purchase vegan chocolate?

4. Are there any other reasons or factors that would make you more or less likely to purchase vegan chocolate that we haven't discussed yet?

Conclusion: Before we end our interview, is there anything else regarding your views or experiences with vegan chocolate that you would like to add? Do you have any questions? Thank you so much for sharing your thoughts and experiences with me today. Your input is invaluable to my research. I really appreciate you taking the time to speak to me today. Have a great day!

Appendix C: Summary of the In-Depth Interviews

Interview 1: 27-year-old married, health-oriented vegan male

This 27-year-old man's adoption of **health-oriented veganism** is driven primarily by his doctor's recommendation to avoid animal products due to health issues, encouraging him to explore vegan alternatives such as chocolate. Nevertheless, he still **favors conventional chocolate** given his preference for its dairy taste over vegan alternatives, however, he maintains his new diet for health reasons. His **shopping habits** include buying 1-2 bars of vegan chocolate per week, indicating a regular consumption pattern, often involving his wife in the shopping process. His **primary motivation** is **health concerns** while **environmental** and **animal welfare** considerations are secondary and were only mentioned after directly asking him. He demonstrates a general awareness of environmental issues and animal welfare, in line with his enjoyment of outdoor activities and previous preferences for organic or local produce. **Social influence** and **self-image** play a minimal role in his decision to consume vegan products, as his choice is driven by health concerns rather than personal or social preference.

Interview 2: 22-year-old vegan male student

The 22-year-old male university student became vegan through the **social influence** of his girlfriend, highlighting the strong impact of social relationships on dietary change. With time, the dietary change has evolved into a deeper commitment, including a **shift in motivations** towards **environmental** and **animal welfare**, indicating a significant shift from social to personal values through his vegan journey. A growing awareness and appreciation of the variety and quality of vegan substitutes, demonstrates his growing personal enjoyment of these products. Together with his girlfriend he thinks he has all the resources (high **perceived behavioral control**) to purchase the vegan products they like. This also reflects his shopping behavior, as he purchases vegan products several times a week whenever it is convenient for him after classes. The shift from **social influence** and **subjective norm** towards purchase intention driven by environmental concerns and an environmental self-identity demonstrates a **personal shift** towards environmental and animal welfare which represents a wholehearted adoption of vegan values beyond the initial social cues.

Interview 3: 17-year-old male high school student and occasional vegan

The 17-year-old male teenager, who was raised by vegan parents, embraces a unique attitude within the vegan lifestyle as he identifies as an **"occasional vegan"**. He has a **positive attitude** towards veganism based on his upbringing in a vegan household, which emphasized the **environmental** and **health benefits** associated with this diet. Although this is the basis of his upbringing, he strongly **prefers animal products** and explains his choice with taste and quality factors over vegan substitutes. However, his family's dietary choice allows him to **opt for vegan meals** prepared by his parents if he likes them, but he can also choose non-vegan options when he eats at school or when he wants a particular animal product. Therefore, his eating habits are a combination of both **parental influence** and **personal preference**, but ultimately preferring traditional animal products while appreciating environmental and ethical implications of the vegan diet.

Interview 4: 24-year-old non-vegan bachelor

The 24-year-old man, who recently graduated university and lives on his own, was raised in a **traditional meat-eating household** and has been influenced by his **interactions with vegan friends**. While he recognizes and appreciates the vegan lifestyle, he prefers animal products. He believes that vegan choices have a **positive impact on the world**, and he explains his openness to trying vegan substitutes through the influence of his friends. His **attitude towards vegan** products is mainly

motivated out of concern for animal welfare, a thought that emerges through social interactions rather than deep personal conviction or extensive product knowledge. He expresses an openness to veganism without being fully committed to it. However, he acknowledges that he lacks initiative to buy vegan products himself when he goes grocery shopping, suggesting a gap between appreciation and action.

Interview 5: 16-year-old female teenager raised by vegan parents

The 16-year-old female teenager, who **grew up in a vegan family**, illustrated the long-term impact on her lifestyle and attitude. Being raised in an environment in which veganism represented both a practice and a principle, she developed a **positive attitude towards the lifestyle**, as she saw the positive contribution to **environmental protection** and **personal health**. Over the past few years, she has been able to experience a growing variety of vegan substitutes and greatly appreciates it, as it has improved her nutritional experience significantly over the years. She is **not the main decision maker** when it comes to grocery shopping in her household. However, she does enjoy joining her mother in shopping, picking out her favorite vegan chocolate and ice cream. Her attitude towards veganism, which was strongly influenced by her parents, shows the influence of upbringing on purchasing decisions, where **social influence** and **norms** play a central role. She is aligned with her family's **ethical** and **environmental values** which is their main deciding factor for being vegan. Despite her young age and dependence on her parents for her food choices, veganism is a central part of her identity and choices.

Interview 6: 22-year-old female vegan

The young female, who is 22 years old, has recently received her bachelors degree and now works in a junior role. She has followed a **vegetarian diet** for years, which was initiated by early exposure to documentaries concerning **animal well-being**. Consequently, she began to explore vegetarian as well as vegan alternatives **motivated by animal welfare** and **environmental concerns**. Although she tends to purchase vegan alternatives omitting all kinds of animal products, she hesitates to fully identify as a vegan because she occasionally explores dairy products. Overall, the growing variety of vegan substitutes increasingly allows her to balance her diet slowly **shifting towards a more vegan** than vegetarian diet, in line with her **ethical** and environmental values. Her self-perception as environmentally friendly and committed to animal welfare strengthens this focus. At the same time, it also highlights her deep-rooted belief to change her own diet.

Interview 7: 28-year-old married breast feeding female

The 28-year-old new mother has changed her diet due to her baby's dairy intolerance. She currently consumes vegan substitutes to ensure her diet is dairy-free while breastfeeding (**health-driven dietary change**). She finds that this transition is easier due to the **labeling** of products, as the vegan labels reduce the complexity of her shopping experience, improve her **product knowledge**, and allow her to make informed choices without having to examine ingredients. Although, it is a **temporary dietary change** and she plans to return to consuming animal products after breastfeeding, her journey has **increased her awareness** of vegan options, and she appreciates the **variety** of vegan chocolates available. Her **health consciousness** is the primary driver shaping her positive attitude towards vegan chocolate, influenced by the need to take her baby's health into account. While **social influence** as well as her friends and family advocate a vegan diet for the health and **environmental benefits**, she acknowledges that such social perspectives would have a positive impact in other circumstances. Her perspective highlights a multilayered understanding of veganism recognizing different motivations for vegan choices, from health to environmental concerns to subjective norms.

Interview 8: 23-year-old non-vegan female college student

The 23-year-old non-vegan student presents a **non-vegan view** of veganism which **respects** and appreciates both the **environmental** and **animal welfare benefits**, though she has chosen not to follow a vegan diet because of her personal preference for animal products. She has a **high awareness of vegan products** but is not convinced that these can match the taste of traditional animal products. Her skepticism reflects an **overall hesitation** to explore vegan alternatives fully, which also resonates in her not having any specific factors that determine her attitude towards vegan product purchase intention. However, despite her own dietary choices, she recognizes the positive contributions of veganism to environmental and animal welfare. Her opinion highlights the **complex motivations** behind dietary choices and the wide range of attitudes towards veganism, ranging from full support to respectful non-acceptance, like her personal and subjective choice of not following a vegan diet.

Appendix D: Construct Overview

Construct	Scale Origin	Items	Measurement
Attitude towards Purchasing Vegan Chocolate Confectionery	Sultan & Wong (2019) Todd & Taylor (1995)	1. I like the idea of buying vegan chocolate confectionery. 2. I love to purchase vegan chocolate confectionery items rather than buying conventional chocolate products if I have an option. 3. I always like to buy vegan chocolate confectionery. 4. I would like to buy confectionery products that are cultivated through animal free process. 5. I have a positive attitude towards buying vegan chocolate confectionery.	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree
Subjective Norm	Ajzen (2006) Choi & Johnson (2019)	1. Most of the people I care about think I should buy vegan chocolate confectionery. 2. The people in my life, whose opinions I value, would approve if I buy vegan chocolate confectionery. 3. Most of the people, who I care about, buy vegan chocolate confectionery. 4. The people in my life whose opinions I value advise me to buy vegan chocolate confectionery. 5. People those are important to me believe I should buy vegan chocolate confectionery.	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree
Perceived Behavioral Control	Khare (2015) Kim et al. (2013) Todd & Taylor (1995) Prakash & Pathak (2017)	1. The decision to buy vegan chocolate confectionery is entirely up to me. 2. I am sure that if I want I can buy vegan chocolate confectionery. 3. I have enough money to buy vegan chocolate confectionery. 4. I have enough time to buy vegan chocolate confectionery. 5. I have enough knowledge to buy vegan chocolate confectionery.	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree
Health Awareness	Teng & Lu (2016)	1. I think about my health. 2. I am aware of changes in my health. 3. I tend to be informed about my health. 4. I have responsibility for the state of my health. 5. I monitor my health status daily.	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree
Environmental Concerns	Mostafa (2009)	1. The balance of nature is very delicate and can be easily changed. 2. Human beings, when they interfere with nature, often cause disastrous consequences. 3. Human beings must live in harmony with nature to survive. 4. Humanity is abusing the environment. 5. Humanity was not created to dominate the rest of nature.	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree

Animal Welfare	Graaf et al. (2016)	1. Animals must be kept in their natural habitat. 2. It is important for animals to behave naturally. 3. I care about the welfare of animals. 4. Animals must not suffer. 5. Companies must think about their profits, but also about animals.	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree
Social Influence	Varshneya et al. (2017)	1. My friends often recommend me vegan chocolate. 2. My friends usually go shopping for vegan chocolate with me. 3. My friends often share their experiences about vegan chocolate with me. 4. My friends often share their knowledge about vegan chocolate with me.*	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree
Product Knowledge	Sun & Wang (2019)	1. I am very familiar with vegan chocolate confectionery. 2. When I go shopping, I frequently see vegan chocolate confectionery in shopping venues. 3. I often learn about vegan chocolate confectionery through articles or news. 4. I know a lot about vegan chocolate confectionery.	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree
Self-Image Congruence with vegan consumers	Nguyen & Nguyen (2020)	1. The image of the vegan consumer is similar to how I am. 2. The image of the vegan consumer is similar to how I see myself. 3. The image of the vegan consumer is similar to how others believe who I am. 4. The image of the vegan consumer is similar to how others see me.	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree
Environmental Self-Image	Van der Werff et al. (2013)	1. Acting environmentally-friendly is an important part of who I am. 2. I am the type of person who acts environmentally-friendly. 3. I see myself as an environmentally-friendly person.	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree
Purchase Intention	Nystrand & Olsen (2020) Todd & Taylor (1995) White et al. (2012)	1. I would be likely to purchase vegan chocolate confectionery. 2. I would be willing to buy vegan chocolate confectionery. 3. I would likely make vegan chocolate confectionery one of my first choices in this product category. 4. I would exert a great deal of effort to purchase vegan chocolate confectionery. 5. I intend to purchase vegan chocolate confectionery.	7-point Likert-scale: 1 = strongly disagree 7 = strongly agree

Note: * Items were reverse scored during analysis.

Appendix E: Quantitative Survey Questionnaire

Start of Block: Block 1

Introduction
Dear Participant,
Thank you for taking a few minutes to assist me with my **master's thesis** on the topic of *purchase decisions among Generation Z consumers regarding vegan chocolate* 🍫.
The following survey focuses exclusively on your personal opinion, meaning there are no right or wrong answers. Please always respond **honestly** and based on your personal assessment. All information will remain **anonymous**!
Completing the questionnaire will take approximately **5 minutes** ⏱.
If you would like to complete the survey in **German**, you may change the language settings in the top right corner. DE

Thank you in advance for your participation and enjoy the survey 😊.
For questions or comments, I am available at the following email address: s-dbrandauer@ucp.pt ✉.

Dominique Brandauer
(International Master in Management with Specialization in Marketing)

P.S.: This survey contains credits to get free survey responses at SurveySwap.io

End of Block: Block 1

Start of Block: Block 2

Q1: Age
How **old** are you?

▼ 13 years old or younger (1) ... 30 years old or older (18)

Q2: Nationality
What is your **nationality**?

- ○ German (1)
- ○ Other (2)

End of Block: Block 2

Start of Block: Block 16

Display This Question:
If Age = 13 years old or younger
Or Age = 30 years old or older
Or Nationality = Other

End for disqualifies: Thank you for your interest in participating in my survey. 🌟 It appears that **your** current **profile does not meet** the specific **criteria** I am looking for in this study. I greatly appreciate your willingness to contribute and want to assure you that your time and effort are highly valued.

Skip To: End of Survey If End for disqualifies Displayed

End of Block: Block 16

Start of Block: Block 3

Q3: Vegan
Do you follow a **vegan diet?** 🌱🌿😋
Definition: A vegan diet is a type of diet that excludes meat, eggs, dairy products, and all other animal-derived ingredients.

- ○ Never (1)
- ○ Sometimes (2)
- ○ Often (3)
- ○ Always (4)

End of Block: Block 3

Start of Block: Block 4

Q4: Attitude towards Purchase
To what extent do you **agree** with the **following statements?** 🍫🌿😋

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I **like** the **idea** of **buying** vegan chocolate. (1)	○	○	○	○	○	○	○
I **love** to purchase **vegan** chocolate items **rather than** buying **conventional** chocolate products if I have an option. (2)	○	○	○	○	○	○	○
I **always like** to **buy** vegan chocolate. (3)	○	○	○	○	○	○	○
I would like to buy confectionery **products** that are **cultivated** through **animal free process.** (4)	○	○	○	○	○	○	○
I have a **positive attitude** towards **buying vegan** chocolate. (5)	○	○	○	○	○	○	○

End of Block: Block 4

Start of Block: Block 5

Q5: Subjective Norm
To what extent do you **agree** with the **following statements?** 👫🗣️👀

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Most of the **people** I care about **think I should buy** vegan chocolate. (1)	○	○	○	○	○	○	○
The **people** in my life, whose opinions I value, **would approve if I buy vegan** chocolate. (2)	○	○	○	○	○	○	○
Most of the **people**, **who I care about**, **buy** vegan chocolate. (3)	○	○	○	○	○	○	○
The **people** in my life, whose opinions I value, **advise** me to **buy vegan** chocolate. (4)	○	○	○	○	○	○	○
People, those are important to me, **believe** I **should buy vegan** chocolate. (5)	○	○	○	○	○	○	○

End of Block: Block 5

Start of Block: Block 6

Q6: Perceived Behavioral Control

To what extent do you **agree** with the **following statements?** 💪🤷

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
The **decision to buy** vegan chocolate is **entirely up to me**. (1)	○	○	○	○	○	○	○
I am sure that **if I want I can buy** vegan chocolate. (2)	○	○	○	○	○	○	○
I have **enough money** to buy vegan chocolate. (3)	○	○	○	○	○	○	○
I have **enough time** to buy vegan chocolate. (4)	○	○	○	○	○	○	○
I have **enough knowledge** to buy vegan chocolate. (5)	○	○	○	○	○	○	○

End of Block: Block 6

Start of Block: Block 7

Q7: Health Awareness

To what extent do you **agree** with the **following statements?** 🍏❤️🧘

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I **think about my health**. (1)	○	○	○	○	○	○	○
I am **aware** of **changes** in my **health**. (2)	○	○	○	○	○	○	○
I tend to **be informed** about **my health**. (3)	○	○	○	○	○	○	○
I have **responsibility** for the **state of my health**. (4)	○	○	○	○	○	○	○
I **monitor** my **health status daily**. (5)	○	○	○	○	○	○	○

End of Block: Block 7

Start of Block: Half Time

Half Time
Congratulations, you are halfway there! 🎉
I really appreciate your input and the time you're dedicating to this.
Thank you for your continued participation! 🚀

End of Block: Half Time

Start of Block: Block 8

Q8: Environmental Concern
To what extent do you **agree** with the **following statements?** 🌍♻️🌱

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
The **balance of nature** is very **delicate** and can be **easily changed**. (1)	○	○	○	○	○	○	○
Human beings, when they interfere with nature, **often cause disastrous consequences**. (2)	○	○	○	○	○	○	○
Human beings **must live in harmony** with nature to survive. (3)	○	○	○	○	○	○	○
Humanity is **abusing** the **environment**. (4)	○	○	○	○	○	○	○
Humanity was **not created** to **dominate** the rest of **nature**. (5)	○	○	○	○	○	○	○

End of Block: Block 8

Start of Block: Block 9

Q9: Animal Welfare

To what extent do you **agree** with the **following statements?**

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Animals must be kept **in** their **natural habitat.** (1)	○	○	○	○	○	○	○
It is **important** for **animals** to **behave naturally**. (2)	○	○	○	○	○	○	○
I **care** about the **welfare** of animals. (3)	○	○	○	○	○	○	○
Animals must **not suffer**. (4)	○	○	○	○	○	○	○
Companies must **think** about their profits, but also **about animals**. (5)	○	○	○	○	○	○	○

End of Block: Block 9

Start of Block: Block 10

Q10: Social Influence

To what extent do you **agree** with the **following statements?**

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
My **friends** often **recommend** me **vegan** chocolate. (1)	○	○	○	○	○	○	○
My **friends** usually **go shopping for vegan** chocolate **with me.** (2)	○	○	○	○	○	○	○
My **friends** often **share their experiences** about **vegan** chocolate with me. (3)	○	○	○	○	○	○	○
My **friends** often **share their knowledge** about **vegan** chocolate with me. (4)	○	○	○	○	○	○	○
This is an **attention question**, please select "Disagree". (5)	○	○	○	○	○	○	○

End of Block: Block 10

Start of Block: Block 11

Q11: Product Knowledge

To what extent do you **agree** with the **following statements?**

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I am very **familiar** with **vegan chocolate**. (1)	○	○	○	○	○	○	○
When I go shopping, I **frequently see vegan chocolate** in shopping venues. (2)	○	○	○	○	○	○	○
I often **learn** about **vegan chocolate** through **articles** or **news**. (3)	○	○	○	○	○	○	○
I **know a lot** about vegan chocolate. (4)	○	○	○	○	○	○	○

End of Block: Block 11

Start of Block: Block 12

Q12: Self-Image Congruence

To what extent do you **agree** with the **following statements?**

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
The **image** of the vegan consumer is **similar to how I am.** (1)	○	○	○	○	○	○	○
The **image** of the vegan consumer is **similar to how I see myself.** (2)	○	○	○	○	○	○	○
The **image** of the vegan consumer is **similar to how others believe who I am.** (3)	○	○	○	○	○	○	○
The **image** of the vegan consumer is **similar to how others see me.** (4)	○	○	○	○	○	○	○

End of Block: Block 12

Start of Block: Block 13

Q13: Environmental Self-Identity

To what extent do you **agree** with the **following statements?**

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Acting environmentally-friendly is an important part of who I am. (1)	○	○	○	○	○	○	○
I am the type of person who **acts environmentally-friendly.** (2)	○	○	○	○	○	○	○
I see myself as an **environmentally-friendly person.** (3)	○	○	○	○	○	○	○

End of Block: Block 13

Start of Block: Block 14

Q14: Purchase Intention
To what extent do you **agree** with the **following statements?**

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I would be **likely** to **purchase vegan chocolate.** (1)	○	○	○	○	○	○	○
I **would be willing** to buy vegan chocolate. (2)	○	○	○	○	○	○	○
I would likely make **vegan chocolate** one of my **first choices** in this product **category**. (3)	○	○	○	○	○	○	○
I would exert a **great deal of effort** to **purchase** vegan chocolate. (4)	○	○	○	○	○	○	○
I **intend** to **purchase** vegan chocolate. (5)	○	○	○	○	○	○	○

Q15: Reasons to purchase
Why would you **purchase** vegan chocolate?

_____
_____

Q16: Reasons not to purchase
Why would you **not purchase** vegan chocolate?

_____
_____

End of Block: Block 14

Start of Block: Block 15

Q17: Gender
What is your **gender**?

- ○ Male (1)
- ○ Female (2)
- ○ Non-binary / third gender (3)
- ○ Prefer not to say (4)

Q18: Highest Education
What is the **highest level of education** you have completed?

- ○ None (so far) (1)
- ○ Realschul Diploma (2)
- ○ High school Diploma (3)
- ○ Bachelor Degree (4)
- ○ Master Degree (5)
- ○ Doctorate (6)
- ○ Other (7)

Q19: Occupation
What is your **current occupation**?

- ○ High School Student (1)
- ○ University Student (2)
- ○ Apprentice (3)
- ○ Employed (4)
- ○ Self-Employed (5)
- ○ Other (6)

End of Block: Block 15

Appendix F: Coding Plan of the Quantitative Survey Questionnaire

	Code	Survey Label (German)	Survey Label (English)
Age			
	Metrics between:		
	Min:	13	13
	Max:	29	29
Nationality			
	1	Deutsch	German
	2	Sonstige	Other
Vegan Diet			
	1	Nie	Never
	2	Manchmal	Sometimes
	3	Oft	Often
	4	Immer	Always
ATT, SN, PBC, HA, EC, AW, SI, PK, SIC, ESI, PI			
	1	Stimme überhaupt nicht zu	Strongly disagree
	2	Stimme nicht zu	Disagree
	3	Stimme eher nicht zu	Somewhat disagree
	4	Neutral	Neither agree nor disagree
	5	Stimme eher zu	Somewhat agree
	6	Stimme zu	Agree
	7	Stimme voll und ganz zu	Strongly agree
Gender			
	1	Männlich	Male
	2	Weiblich	Female
	3	Divers	Non-binary / third gender
	4	Keine Angabe	Prefer not to say
Highest Education			
	1	Realschulabschluss	Realschul Diploma
	2	Abitur oder Fachhochschulreife	Highschool Diploma
	3	Bachelor-Abschluss	Bachelor Degree
	4	Master-Abschluss	Master Degree
	5	Promotion	Doctorate
	6	Sonstiges	Other
	7	(Noch) Keinen	None (so far)
Occupation			
	1	Schüler:in	High School Student
	2	Student:in	University Student
	3	Auszubildene:r	Apprentice
	4	Berufstätig	Employed
	5	Selbstständig	Self-Employed
	6	Sonstige	Other

Appendix G: Barriers and Drivers to Purchase Vegan Chocolate Confectionery

Barriers to Purchase Vegan Chocolate Confectionery

Figure 8: *Wordcloud: Barriers to Purchase Vegan Chocolate Confectionery.*

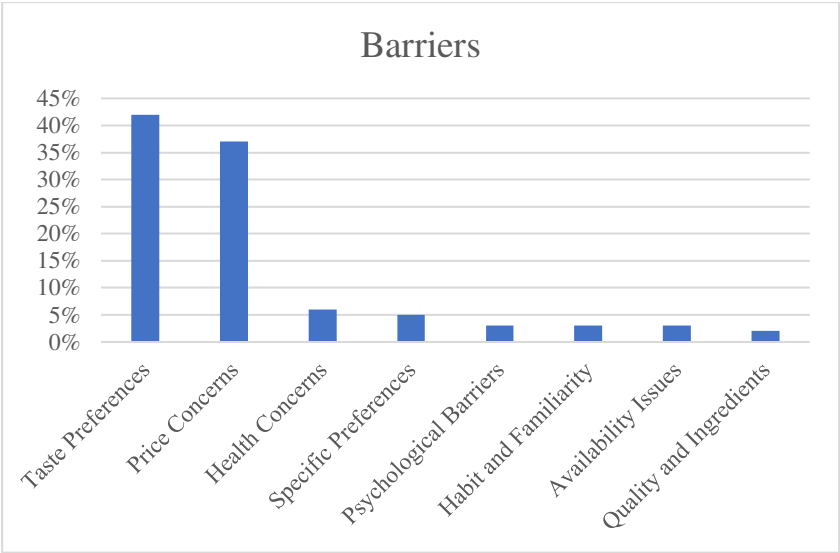

Figure 9*: Diagram Barriers to Purchase Vegan Chocolate Confectionery.*

Drivers to Purchase Vegan Chocolate Confectionery

Figure 10: *Wordcloud: Drivers to Purchase Vegan Chocolate Confectionery.*

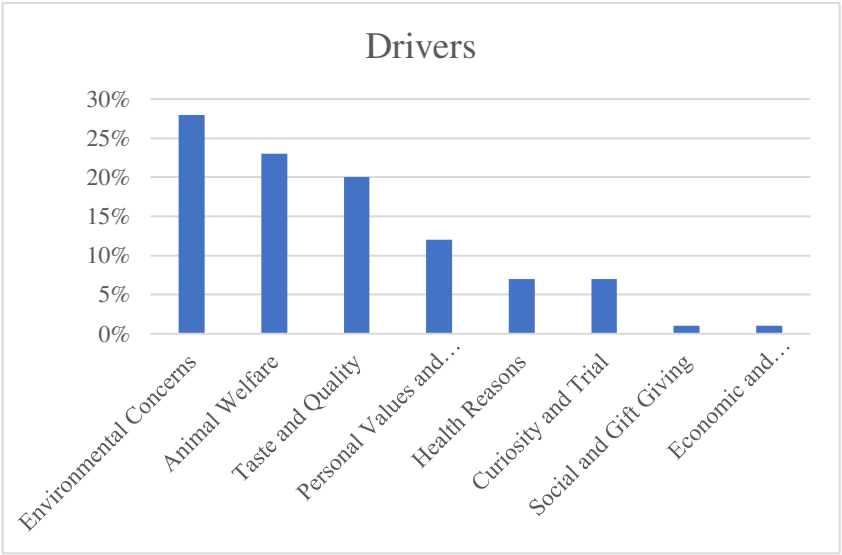

Figure 11: *Diagram Drivers to Purchase Vegan Chocolate Confectionery.*

Appendix H: Effects on Purchase Intention of Vegan Chocolate Confectionery – TPB: ATP, SN, PBC on PI

Descriptive Statistics

	Mean	Std. Deviation	N
PI	0.00	1.00	272
ATP	0.00	1.00	272
SN	0.00	1.00	272
PBC(1)	0.00	1.00	272
PBC(2)	0.00	1.00	272

Correlations

		PI	ATP	SN	PBC(1)	PBC(2)
Pearson Correlation	**PI**	1.000	.765	.499	.064	.298
	ATP	.765	1.000	.608	.000	.379
	SN	.499	.608	1.000	-.130	.227
	PBC(1)	.064	.000	-.130	1.000	.000
	PBC(2)	.298	.379	.227	.000	1.000
Sig. (1-tailed)	**PI**	.	<.001	<.001	.145	<.001
	ATP	.000	.	.000	.499	.000
	SN	.000	.000	.	.016	.000
	PBC(1)	.145	.499	.016	.	.500
	PBC(2)	.000	.000	.000	.500	.

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	PBC (2), PBC (1), SN, ATP[b]	-	Enter

a. Dependent Variable: PI
b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.770[a]	0.593	0.587	0.6428789	1.977

a. Predictors: (Constant), PBC(2), PBC(1), SN, ATP
b. Dependent Variable: PI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	**Regression**	160.651	4	40.163	97.177	< 0.001[b]
	Residual	110.349	267	0.413		
	Total	271.000	271			

a. Dependent Variable: PI
b. Predictors: (Constant), PBC(2), PBC(1), SN, ATP

Coefficients[a]

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
							Tolerance	VIF
1	(Constant)	1.349E-16	0.039		0.000	1.000		
	ATP	0.720	0.052	0.720	13.840	<0.001	0.563	1.775
	SN	0.068	0.050	0.068	1.369	0.172	0.613	1.631
	PBC(1)	0.073	0.040	0.073	1.855	0.065	0.973	1.028
	PBC(2)	0.010	0.042	0.010	0.234	0.815	0.856	1.168

a. Dependent Variable: PI

Appendix I: Effects on Purchase Intention of Vegan Chocolate Confectionery – TPB: ATP, SN, PBC (incl. Interactions) on PI

Descriptive Statistics

	Mean	Std. Deviation	N
PI	0.00	1.00	272
ATP	0.00	1.00	272
SN	0.00	1.00	272
PBC(1)	0.00	1.00	272
PBC(2)	0.00	1.00	272
ATP*SN	0.61	1.08	272
ATP*PBC1	-0.01	1.05	272
ATP*PBC2	0.38	1.04	272
SN*PBC1	-0.13	0.90	272
SN*PBC2	0.23	0.95	272
PBC1*PBC2	0.00	1.20	272

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	PBC (2), PBC (1), SN, ATP, ATP*SN, ATP*PBC(1), ATP*PBC(2), SN*PBC(1), SN*PBC(2), PBC(1)* PBC(2)[b]	-	Enter

a. Dependent Variable: PI

b. All requested variables entered.

Correlations

		PI	ATP	SN	PBC1	PBC2	ATP* SN	ATP* PBC1	ATP* PBC2	SN* PBC1	SN* PBC2	PBC1* PBC2
Pearson Correlation	**PI**	1.000	.765	.499	.064	.298	-.008	.087	.043	.101	-.010	-.056
	ATP	.765	1.000	.608	.000	.379	.144	.136	.066	.117	.069	-.012
	SN	.499	.608	1.000	-.130	.227	.271	.100	.063	.163	.102	.022
	PBC1	.064	.000	-.130	1.000	.000	.098	-.286	-.013	-.121	.027	-.122
	PBC2	.298	.379	.227	.000	1.000	.061	-.013	-.315	.029	-.275	.042
	ATP* SN	-.008	.144	.271	.098	.061	1.000	-.095	.288	.025	.371	.021
	ATP* PBC1	.087	.136	.100	-.286	-.013	-.095	1.000	.007	.646	.027	.635
	ATP* PBC2	.043	.066	.063	-.013	-.315	.288	.007	1.000	.082	.637	-.153
	SN* PBC1	.101	.117	.163	-.121	.029	.025	.646	.082	1.000	.078	.479
	SN* PBC2	-.010	.069	.102	.027	-.275	.371	.027	.637	.078	1.000	-.160
	PBC1* PBC2	-.056	-.012	.022	-.122	.042	.021	.635	-.153	.479	-.160	1.000
Sig. (1-tailed)	**PI**	.	<.001	<.001	.145	<.001	.450	.076	.238	.048	.435	.178
	ATP	.000	.	.000	.499	.000	.009	.012	.138	.027	.129	.425
	SN	.000	.000	.	.016	.000	.000	.050	.151	.004	.046	.361
	PBC1	.145	.499	.016	.	.500	.054	.000	.413	.023	.327	.022
	PBC2	.000	.000	.000	.500	.	.160	.414	.000	.319	.000	.243
	ATP* SN	.450	.009	.000	.054	.160	.	.059	.000	.339	.000	.365
	ATP*P BC1	.076	.012	.050	.000	.414	.059	.	.456	.000	.327	.000
	ATP*P BC2	.238	.138	.151	.413	.000	.000	.456	.	.090	.000	.006
	SN* PBC1	.048	.027	.004	.023	.319	.339	.000	.090	.	.099	.000
	SN* PBC2	.435	.129	.046	.327	.000	.000	.327	.000	.099	.	.004
	PBC1* PBC2	.178	.425	.361	.022	.243	.365	.000	.006	.000	.004	.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.788[a]	0.620	0.606	0.6279981	2.004

a. Predictors: (Constant), PBC (2), PBC (1), SN, ATP, ATP*SN, ATP*PBC(1), ATP*PBC(2), SN*PBC(1), SN*PBC(2), PBC(1)* PBC(2)

b. Dependent Variable: PI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	168.066	10	16.807	42.615	< 0.001[b]
	Residual	102.934	261	0.394		
	Total	271.000	271			

a. Dependent Variable: PI

b. Predictors: (Constant), PBC (2), PBC (1), SN, ATP, ATP*SN, ATP*PBC(1), ATP*PBC(2), SN*PBC(1), SN*PBC(2), PBC(1)* PBC(2)

Coefficients[a]

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
							Tolerance	VIF
1	(Constant)	0.077	0.046		1.667	0.097		
	ATP	0.702	0.053	0.702	13.290	<0.001	0.522	1.916
	SN	0.116	0.051	0.116	2.282	0.023	0.561	1.783
	PBC(1)	0.097	0.041	0.097	2.353	0.019	0.862	1.161

	PBC(2)	0.019	0.046	0.019	0.409	0.683	0.701	1.427
	ATP*SN	-0.133	0.042	-0.143	-3.177	0.002	0.720	1.388
	ATP* PBC(1)	0.010	0.059	0.011	0.171	0.864	0.374	2.671
	ATP* PBC(2)	0.070	0.050	0.072	1.401	0.162	0.545	1.834
	SN* PBC(1)	0.042	0.057	0.038	0.738	0.461	0.546	1.832
	SN* PBC(2)	-0.078	0.056	-0.074	-1.401	0.162	0.518	1.930
	PBC(1)* PBC(2)	-0.052	0.045	-0.062	-1.170	0.243	0.511	1.957

a. Dependent Variable: PI

Appendix J: Effects on Purchase Intention of Vegan Chocolate Confectionery – Extended TPB: ATP, SN, PBC, HA, EC, AW, SIC, PK, SI, ESI on PI

Descriptive Statistics

	Mean	Std. Deviation	N
PI	0.00	1.00	272
ATP	0.00	1.00	272
SN	0.00	1.00	272
PBC(1)	0.00	1.00	272
PBC(2)	0.00	1.00	272
HA	0.00	1.00	272
EC	0.00	1.00	272
AW	0.00	1.00	272
SI	0.00	1.00	272
PK	0.00	1.00	272
SIC	0.00	1.00	272
ESI	0.00	1.00	272

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	ESI, SIC, PK, SI, AW, EC, HA, PBC (2), PBC (1), SN, ATP[b]	-	Enter

a. Dependent Variable: PI

b. All requested variables entered.

Correlations

		PI	ATP	SN	PBC1	PBC2	HA	EC	AW	SI	PK	SIC	ESI
Pearson Correlation	**PI**	1.000	.765	.499	.064	.298	.203	.410	.451	.435	.492	.498	.325
	ATP	.765	1.000	.608	.000	.379	.273	.454	.465	.472	.525	.533	.390
	SN	.499	.608	1.000	-.130	.227	.159	.254	.204	.670	.468	.495	.270
	PBC1	.064	.000	-.130	1.000	.000	.195	.304	.317	-.241	-.108	-.125	.170
	PBC2	.298	.379	.227	.000	1.000	.248	.177	.161	.172	.456	.241	.226
	HA	.203	.273	.159	.195	.248	1.000	.355	.305	-.018	.207	.166	.383
	EC	.410	.454	.254	.304	.177	.355	1.000	.614	.168	.161	.222	.333
	AW	.451	.465	.204	.317	.161	.305	.614	1.000	.159	.193	.291	.436
	SI	.435	.472	.670	-.241	.172	-.018	.168	.159	1.000	.516	.472	.194
	PK	.492	.525	.468	-.108	.456	.207	.161	.193	.516	1.000	.478	.296
	SIC	.498	.533	.495	-.125	.241	.166	.222	.291	.472	.478	1.000	.448
	ESI	.325	.390	.270	.170	.226	.383	.333	.436	.194	.296	.448	1.000
Sig. (1-tailed)	**PI**	.	<.001	<.001	.145	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
	ATP	.000	.	.000	.499	.000	.000	.000	.000	.000	.000	.000	.000
	SN	.145	.000	.	.016	.000	.004	.000	.000	.000	.000	.000	.000
	PBC1	.000	.499	.016	.	.500	.001	.000	.000	.000	.038	.019	.002
	PBC2	.000	.000	.000	.500	.	.000	.002	.004	.002	.000	.000	.000
	HA	.000	.000	.004	.001	.000	.	.000	.000	.384	.000	.003	.000
	EC	.000	.000	.000	.000	.002	.000	.	.000	.003	.004	.000	.000
	AW	.000	.000	.000	.000	.004	.000	.000	.	.004	.001	.000	.000
	SI	.000	.000	.000	.000	.002	.384	.003	.004	.	.000	.000	.001
	PK	.000	.000	.000	.038	.000	.000	.004	.001	.000	.	.000	.000
	SIC	.000	.000	.000	.019	.000	.003	.000	.000	.000	.000	.	.000
	ESI	.000	.000	.000	.002	.000	.000	.000	.000	.001	.000	.000	.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.790[a]	0.625	0.609	0.6253654	1.990

a. Predictors: (Constant), PBC(2), PBC(1), SN, ATP, ESI, SIC, PK, SI, AW, EC, HA

b. Dependent Variable: PI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	169.319	11	15.393	39.359	< 0.001[b]
	Residual	101.681	260	0.391		
	Total	271.000	271			

a. Dependent Variable: PI

b. Predictors: (Constant), PBC(2), PBC(1), SN, ATP, ESI, SIC, PK, SI, AW, EC, HA

Coefficients[a]

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
							Tolerance	VIF
1	(Constant)	1.547E-16	0.038		0.000	1.000		
	ATP	0.599	0.060	0.599	10.025	<0.001	0.405	2.470
	SN	-0.005	0.058	-0.005	-0.078	0.938	0.424	2.356
	PBC(1)	0.075	0.044	0.075	1.727	0.085	0.757	1.321

	PBC(2)	-0.017	0.044	-0.017	-0.384	0.701	0.737	1.358
	HA	-0.034	0.044	-0.034	-0.757	0.450	0.732	1.365
	EC	0.034	0.052	0.034	0.658	0.511	0.538	1.859
	AW	0.102	0.053	0.102	1.913	0.057	0.509	1.963
	SI	0.056	0.057	0.056	0.972	0.332	0.442	2.260
	PK	0.114	0.053	0.114	2.167	0.031	0.522	1.916
	SIC	0.105	0.051	0.105	2.060	0.040	0.551	1.814
	ESI	-0.051	0.048	-0.051	-1.065	0.288	0.631	1.585

a. Dependent Variable: PI

Appendix K: Effects on Purchase Intention of Vegan Chocolate Confectionery – Extended TPB: ATP, SN, PBC, HA, EC, AW, SI, PK, SIC, ESI (incl. Interactions) on PI

No SPSS data is shown in this appendix, as the analysis was not carried out due to the imitations.

However, all 55 two-way interactions are presented:

- Interaction_ATP_SN
- Interaction_ATP_PBC1
- Interaction_ATP_PBC2
- Interaction_ATP_HA
- Interaction_ATP_EC
- Interaction_ATP_AW
- Interaction_ATP_SI
- Interaction_ATP_PK
- Interaction_ATP_SIC
- Interaction_ATP_ESI
- Interaction_SN_PBC1
- Interaction_SN_PBC2
- Interaction_SN_HA
- Interaction_SN_EC
- Interaction_SN_AW
- Interaction_SN_SI
- Interaction_SN_PK
- Interaction_SN_SIC
- Interaction_SN_ESI
- Interaction_PBC1_PBC2
- Interaction_PBC1_HA
- Interaction_PBC1_EC
- Interaction_PBC1_AW
- Interaction_PBC1_SI
- Interaction_PBC1_PK
- Interaction_PBC1_SIC
- Interaction_PBC1_ESI
- Interaction_PBC2_HA
- Interaction_PBC2_EC
- Interaction_PBC2_AW
- Interaction_PBC2_SI
- Interaction_PBC2_PK
- Interaction_PBC2_SIC
- Interaction_PBC2_ESI
- Interaction_HA_EC
- Interaction_HA_AW
- Interaction_HA_SI
- Interaction_HA_PK
- Interaction_HA_SIC
- Interaction_HA_ESI
- Interaction_EC_AW
- Interaction_EC_SI
- Interaction_EC_PK
- Interaction_EC_SIC
- Interaction_EC_ESI
- Interaction_AW_SI
- Interaction_AW_PK
- Interaction_AW_SIC
- Interaction_AW_ESI
- Interaction_SI_PK
- Interaction_SI_SIC
- Interaction_SI_ESI
- Interaction_PK_SIC
- Interaction_PK_ESI
- Interaction_SIC_ESI

Appendix L: Effects on Attitude towards Purchasing Vegan Chocolate Confectionery. HA, EC, AW, SI, PK on ATP

Descriptive Statistics

	Mean	Std. Deviation	N
ATP	0.00	1.00	272
HA	0.00	1.00	272
EC	0.00	1.00	272
AW	0.00	1.00	272
SI	0.00	1.00	272
PK	0.00	1.00	272

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	PK, EC, HA, SI, AW[b]	-	Enter

a. Dependent Variable: ATP

b. All requested variables entered.

Correlations

		ATP	HA	EC	AW	SI	PK
Pearson Correlation	**ATP**	1.000	.273	.454	.465	.472	.525
	HA	.273	1.000	.355	.305	-.018	.207
	EC	.454	.355	1.000	.614	.168	.161
	AW	.465	.305	.614	1.000	.159	.193
	SI	.472	-.018	.168	.159	1.000	.516
	PK	.525	.207	.161	.193	.516	1.000
Sig. (1-tailed)	**ATP**	.	<.001	<.001	<.001	<.001	<.001
	HA	.000	.	.000	.000	.384	.000
	EC	.000	.000	.	.000	.003	.004
	AW	.000	.000	.000	.	.004	.001
	SI	.000	.384	.003	.004	.	.000
	PK	.000	.000	.004	.001	.000	.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.771[a]	0.492	0.482	0.7193808	1.491

a. Predictors: (Constant), PK, EC, HA, SI, AW

b. Dependent Variable: ATP

Note: Durbin-Watson is not close to two, potentially indicating a problem of auto-correlation. However, due to the study's design, this does not pose a problem of auto-correlation.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	**Regression**	133.343	5	26.669	51.533	< 0.001[b]
	Residual	137.657	266	0.518		
	Total	271.000	271			

a. Dependent Variable: ATP

b. Predictors: (Constant), PK, EC, HA, SI, AW

Coefficients[a]

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
							Tolerance	VIF
1	(Constant)	6.681E-17	0.044		0.000	1.000		
	HA	0.075	0.049	0.075	1.538	0.125	0.810	1.235
	EC	0.202	0.057	0.202	3.532	<0.001	0.584	1.712
	AW	0.220	0.056	0.220	3.929	<0.001	0.607	1.647
	SI	0.246	0.052	0.246	4.701	<0.001	0.699	1.431
	PK	0.307	0.053	0.307	5.819	<0.001	0.684	1.462

a. Dependent Variable: ATP

Appendix M: Effects on Attitude towards Purchasing Vegan Chocolate Confectionery. HA, EC, AW, SI, PK (incl. Interactions) on ATP

Descriptive Statistics

	Mean	Std. Deviation	N
ATP	0.00	1.00	272
HA	0.00	1.00	272
EC	0.00	1.00	272
AW	0.00	1.00	272
SI	0.00	1.00	272
PK	0.00	1.00	272
HA*EC	0.35	1.61	272
HA*AW	0.30	1.64	272
HA*SI	-0.02	0.94	272
HA*PK	0.21	0.99	272
EC*AW	0.61	1.97	272
EC*SI	0.17	1.02	272
EC*PK	0.16	0.91	272
AW*SI	0.16	1.04	272
AW*PK	0.19	0.93	272
SI*PK	0.51	1.05	272

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	PK, EC, HA, SI, AW, SI*PK, EC*PK, EC*SI, EC*AW, HA*AW, HA*PK, HA*SI, HA*EC, AW*PK, AW*SI[b]	-	Enter

a. Dependent Variable: ATP

b. All requested variables entered.

Correlations

		ATP	HA	EC	AW	SI	PK	HA*EC	HA*AW	HA*SI	HA*PK	EC*AW	EC*SI	EC*PK	AW*SI	AW*SI	SI*PK
Pearson Correlation	**ATP**	1.000	.273	.454	.465	.472	.525	-.070	-.081	.043	-.001	-.108	.050	-.021	.041	-.048	.149
	HA	.273	1.000	.355	.305	-.018	.207	-.255	-.278	-.194	-.216	-.259	.055	-.099	.041	-.098	.035
	EC	.454	.355	1.000	.614	.168	.161	-.251	-.311	.061	-.090	-.436	.050	-.155	.126	-.167	.093
	AW	.465	.305	.614	1.000	.159	.193	-.318	-.377	.045	-.091	-.444	.128	-.171	.090	-.248	.055
	SI	.472	-.018	.168	.159	1.000	.516	.035	.026	.188	.037	.067	.177	.108	.068	.062	.291
	PK	.525	.207	.161	.193	.516	1.000	-.056	-.056	.039	.079	-.079	.095	.057	.055	.071	-.019
	HA*EC	-.070	-.255	-.251	-.318	.035	-.056	1.000	.858	.085	.224	.651	-.225	.254	-.114	.255	-.063
	HA*AW	-.081	-.278	-.311	-.377	.026	-.056	.858	1.000	.136	.311	.735	-.110	.268	-.095	.309	-.024
	HA*SI	.043	-.194	.061	.045	.188	.039	.085	.136	1.000	.559	-.066	.289	.094	.278	.136	.300
	HA*PK	-.001	-.216	-.090	-.091	.037	.079	.224	.311	.559	1.000	.164	.042	.207	.080	.237	.050
	EC*AW	-.108	-.259	-.436	-.444	.067	-.079	.651	.735	-.066	.164	1.000	.013	.418	-.011	.370	-.023
	EC*SI	.050	.055	.050	.128	.177	.095	-.225	-.110	.289	.042	.013	1.000	.477	.605	.247	.156
	EC*PK	-.021	-.099	-.155	-.171	.108	.057	.254	.268	.094	.207	.418	.477	1.000	.257	.585	.086
	AW*SI	.041	.041	.126	.090	.068	.055	-.114	-.095	.278	.080	-.011	.605	.257	1.000	.510	.149
	AW*PK	-.048	-.098	-.167	-.248	.062	.071	.255	.309	.136	.237	.370	.247	.585	.510	1.000	.089
	SI*PK	.149	.035	.093	.055	.291	-.019	-.063	-.024	.300	.050	-.023	.156	.086	.149	.089	1.000
Sig. (1-tailed)	**ATP**	.	<.001	<.001	<.001	<.001	<.001	.124	.092	.240	.494	.038	.208	.362	.251	.215	.007
	HA	.000	.	.000	.000	.384	.000	.000	.000	.001	.000	.000	.181	.052	.251	.053	.282
	EC	.000	.000	.	.000	.003	.004	.000	.000	.160	.069	.000	.203	.005	.019	.003	.063
	AW	.000	.000	.000	.	.004	.001	.000	.000	.230	.067	.000	.018	.002	.069	.000	.184
	SI	.000	.384	.003	.004	.	.000	.281	.336	.001	.272	.137	.002	.038	.132	.155	.000
	PK	.000	.000	.004	.001	.000	.	.179	.181	.260	.096	.097	.058	.174	.181	.121	.375
	HA*EC	.124	.000	.000	.000	.281	.179	.	.000	.082	.000	.000	.000	.000	.030	.000	.152

	HA* AW	.092	.000	.000	.000	.336	.181	.000	.	.012	.000	.000	.036	.000	.059	.000	.345
	HA*SI	.240	.001	.160	.230	.001	.260	.082	.012	.	.000	.138	.000	.061	.000	.013	.000
	HA* PK	.494	.000	.069	.067	.272	.096	.000	.000	.000	.	.003	.247	.000	.095	.000	.204
	EC* AW	.038	.000	.000	.000	.137	.097	.000	.000	.138	.003	.	.418	.000	.429	.000	.352
	EC*SI	.208	.181	.203	.018	.002	.058	.000	.036	.000	.247	.418	.	.000	.000	.000	.005
	EC* PK	.362	.052	.005	.002	.038	.174	.000	.000	.061	.000	.000	.000	.	.000	.000	.078
	AW* SI	.251	.251	.019	.069	.132	.181	.030	.059	.000	.095	.429	.000	.000	.	.000	.007
	AW* PK	.215	.053	.003	.000	.155	.121	.000	.000	.013	.000	.000	.000	.000	.000	.	.072
	SI*PK	.007	.282	.063	.184	.000	.375	.152	.345	.000	.204	.352	.005	.078	.007	.072	.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.720[a]	0.519	0.491	0.7136206	1.752

a. Predictors: (Constant), PK, EC, HA, SI, AW, SI*PK, EC*PK, EC*SI, EC*AW, HA*AW, HA*PK, HA*SI, HA*EC, AW*PK, AW*SI

b. Dependent Variable: ATP

Note: Durbin-Watson is not close to two, potentially indicating a problem of auto-correlation. However, due to the study's design, this does not pose a problem of auto-correlation.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	**Regression**	140.631	15	9.375	18.410	< 0.001[b]
	Residual	130.369	256	0.509		
	Total	271.000	271			

a. Dependent Variable: PI

b. Predictors: (Constant), PK, EC, HA, SI, AW, SI*PK, EC*PK, EC*SI, EC*AW, HA*AW, HA*PK, HA*SI, HA*EC, AW*PK, AW*SI

Coefficients[a]

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
							Tolerance	VIF
1	(Constant)	-0.065	0.055		-1.186	0.237		
	HA	0.082	0.051	0.082	1.622	0.106	0.735	1.360
	EC	0.231	0.060	0.231	3.881	<0.001	0.529	1.891
	AW	0.276	0.059	0.276	4.686	<0.001	0.542	1.845
	SI	0.207	0.058	0.207	3.570	<0.001	0.558	1.791
	PK	0.333	0.055	0.333	6.029	<0.001	0.617	1.621
	HA*EC	-0.039	0.058	-0.063	-0.676	0.500	0.214	4.673
	HA*AW	0.053	0.063	0.087	0.836	0.404	0.175	5.726
	HA*SI	-0.020	0.068	-0.019	-0.290	0.772	0.458	2.183
	HA*PK	0.007	0.059	0.007	0.122	0.903	0.550	1.820
	EC*AW	0.066	0.039	0.130	1.695	0.091	0.319	3.138
	EC*SI	-0.090	0.075	-0.092	-1.209	0.228	0.321	3.112
	EC*PK	0.020	0.079	0.018	0.252	0.802	0.368	2.720
	AW*SI	0.012	0.070	0.012	0.169	0.866	0.361	2.770
	AW*PK	-0.030	0.076	-0.028	-0.394	0.694	0.372	2.690
	SI*PK	0.072	0.047	0.075	1.531	0.127	0.774	1.291

a. Dependent Variable: ATP