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Do values, attitudes, and social norms play a role in younger Norwegian consumers' intention towards fish consumption?

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# **Do values, attitudes and social norms play a role in younger Norwegian consumers' intention towards fish consumption?**

*A study exploring if being environmentally conscious has an effect on consumers' attitude towards fish and green food, and further exploring if these attitudes have an effect on consumers' intention towards fish consumption.*

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*“This thesis is part of the MSc program at BI Norwegian Business School. The school takes no responsibility for the methods used, results found and conclusion drawn.”*

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## Summary

Generation Z and millennials, have listed environmental consciousness as their top personal concerns. However, the theory shows that there is a gap between consumers' attitude and behavior related to behaving environmentally friendly. As fish has a lower carbon footprint than other sources of protein, we suggested there is a connection between being environmentally conscious and consuming fish. Moreover, social norms have been found to have an impact on people's values, attitudes and behavior. Thus, making it interesting to explore if *friends* and *influencers* influence consumers to be more environmentally conscious, having a better attitude towards fish and green food, and lastly their intention towards consuming fish.

The purpose of this study is to examine our extended VAB-model by investigating how environmental consciousness influences individuals' attitude toward fish and attitude towards green food, and further how these attitudes affect their intention to fish consumption. Social norms are investigated as a direct driver for value, attitudes and behavior. This study's topic is initiated by Lerøy, to seek solutions to increase the consumption of fish among younger people, which is why moderators age and gender was explored.

The results from an online survey with 452 respondents shows that environmental consciousness has a positive effect on attitude towards green food. Further, attitude towards fish has a positive effect on intention towards fish consumption. Also, a positive attitude towards green food has a positive effect on the attitude towards fish. However, our study revealed that environmental consciousness *did not* have any effect on the attitude towards fish, and a positive attitude towards green food does *not* have any effect on intention towards fish consumption.

Younger people are less environmentally conscious than people above the age of 35. Our findings indicate that younger people today have a slightly positive attitude towards fish. However, the more environmentally conscious they are, the worse their attitude towards fish is. Younger people are more *concerned* about the environment, however, there is a gap between their level of concern and action. The results indicate that younger people in general are more influenced by social norms, and that friends have a greater effect than influencers.

# 1.0 Introduction

## 1.1 Background

While ethics and sustainability are increasingly important to the public, there has been little research to conduct the public's association with the behaviors of fish consumers (Verbeke et al., 2007). Moreover, there is a lack of research examining consumer perception toward sustainability and fish consumption in relation to the increasing environmental consciousness among younger consumers. A study conducted in 2005 using cross-sectional data from a sample of 381 Flemish women aged 20-50 years shows that the perceived importance toward sustainability has no correlation with fish consumption frequency and attitude toward eating fish (Verbeke et al., 2007). Thus, our study will look at how this field has developed through 16 years, as the younger generations, generation Z and millennials have listed environmental consciousness as their top personal concerns (Deloitte, 2019).

Several studies have been conducted to determine which factors are important in seafood consumption behavior, namely age, taste, health, and convenience (Gempesaw et al., 1995; Kang et al., 2015; Myrland et al., 2000; Olsen, 2003). Although both health and taste are important factors in choosing seafood and food consumption in general, we strive to explore the relationship between environmental consciousness, attitude towards green food and fish, and intention towards fish consumption among younger consumers aged from 18-35 years, whereas consumption represents both eating and buying fish. A study in Norway from 2000, found that fish consumption increases along with household size, age, and education among women aged 30–45 years (Trondsen et al., 2003). This study addresses the lack of research regarding consumers' environmental consciousness value in relation to fish consumption behavior among younger consumers.

## 1.2 Green food

Generally, the word "green" is used synonymously with sustainable, environmentally friendly, and eco-friendly terms. The Brundtland Report defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (United Nations, 1987).



According to the Centre of Sustainability and Excellence (CSE), as referred to in Khamayzer (2016), sustainability practices can be divided into six areas; community, environmental, ethics, employees, supply chain, and philanthropy. The environmental aspect focuses on facility and product operations, carbon reduction, and sustainable materials. In this paper, we will focus on the environmental aspect of sustainability. The term "green" will, therefore, be used simply to denote environmental friendliness. We will therefore define a "green product" as one created with concern for the physical environment (Shrum et al., 1995).

### 1.2.1 Increased Focus on Sustainability

The concern about sustainability is growing globally, and environmental challenges have become a priority in society (Jansson et al., 2010; Nielsen.com, 2015). A survey conducted by Ipsos for Orkla revealed that about half of the consumers in Nordic countries are worried about global warming (Ipsos, 2020). In purchasing decisions, consumers are more than ever aware of their environmental impact. Consumers indicate increasing support for sustainability, according to findings from a series of research done by the Global Web Index (GWI). Consumers believe it is more crucial now than ever before for brands/products to behave more sustainable. The majority of them belong to generation Z. Moreover, consumers, particularly generation Z, have high expectations of their own behaviors. Around 71 percent believe that reducing your carbon footprint or environmental footprint is more important nowadays. According to GWI's results, consumers are willing to accept personal responsibility while simultaneously placing demands on businesses (Gangsø, 2021).

From the Gallup Analysis, they found that younger Americans worry more about global warming than older people. Among adults in the age between 18 to 34, 70 percent stated that they worry about global warming compared to 56 percent for people in age of 55 or older (Reinhart, 2018). Also, protecting the environment or climate change has been reported as the top issue of greatest personal concerns for millennials and generation Z in Norway (Deloitte, 2019). In 2014, 71 percent of people worldwide were concerned about the harm to the planet that humans cause. In 2019, this number has steadily increased to 77 percent (Glocalities, 2019).

The subject of sustainable food choice behavior has been studied from several perspectives, revealing it to be a complex issue. Consumers' willingness to pay a premium for sustainable food has been the most common topic within this line of research. Consumers that are concerned about the environment are willing to pay more for environmentally friendly products with qualities such as animal welfare, sustainability credentials, eco-labels, and so forth, according to most research (Honkanen & Young, 2015). In Verbeke et. al. 's (2007) study, participants placed high perceived importance of sustainability with respect to fish.

In recent years the trend of eating green food and new trends to live more sustainably are constantly emerging. A study conducted in Oslo reported that one in three young people between the ages of 18 and 29 has changed their eating habits in the past year to contribute to a more sustainable city and community (NORAD, 2018). In the year of 2000, there were approximately two percent vegetarians in Norway, which has led to a number of food producers throwing themselves on the “vegetarian wave” - to both meet the consumer and contribute to a more sustainable development. A survey conducted by Ipsos for Orkla shows that the proportion of vegans and vegetarians in Norway has doubled in one year. In 2019, 4 percent of Norwegians said they do not eat meat. In 2020, the share had grown to 8 percent. In addition, the survey shows that the group of consumers who cut down on their meat intake is also growing, and that six out of ten norwegian consumers state that they try to buy products they perceive as sustainable (Orkla, 2020).

According to a report published by Meny (2020) they see a clear shift towards more conscious consumers, where they are more concerned with health, the environment, sustainability and local identity. Further, norwegian consumers report that they want more “green alternatives” in the grocery stores. The grocery industry has had success with vegetarian and ecological products, and there is no category that has grown faster than vegetarian. At Meny, sales of vegetarian products increased by 50 percent in 2018 compared to 2017. Still, only a small proportion of the population consider themselves as some sort of vegetarians, and they are overrepresented among young people. 1 in 10, between the ages of 19 and 29, state that they do not eat meat at all.

Overall, these statistics show that consumers wish for more environmentally friendly and greener alternatives, also that people say they are willing to pay more for such products.

Although many consumers have a favorable attitude toward sustainable products, they generally fail to purchase them (Park & Lin, 2020). The truth is that green alternatives are still not adopted by many consumers (Ditlev-Simonsen, 2017), and consumers do not choose these products when they are in front of the shelves in the store. While there is evidence that consumers are willing to spend more for environmentally friendly products there is also evidence of a gap between attitude and behavior (Gupta & Ogden, 2006).

### 1.2.2 The Green Gap

As mentioned, consumers tend to have a more favorable attitude towards more pro-environmental products. However, the actually sustainable actions display something else, referred to as the “green gap”. This attitude-behavior gap among consumers today has become probably the biggest challenge for marketers, companies, public policymakers, and nonprofit organizations in promoting sustainable consumption (White et al., 2019).

Especially the younger generations seek not only sustainable products and brands but also state that they are willing to pay more for them. As much as 66 percent of consumers worldwide, and 73 percent of these being millennials, state that they are willing to pay more for sustainable options. Among generation Z, who are now representing a great amount of the younger generation today, 62 percent prefer to buy products from sustainable brands (Petro, 2020). It appears that the majority of younger people quest for sustainable solutions and that this trend will only continue, as 54 percent of generation Z state that they are willing to spend 10 percent or more on sustainable products, supported by 50 percent of millennials stating the same (Petro, 2020). According to Fortune (2019), as much as 50 percent of sales growth among consumer packaged goods, from 2013 to 2018, came from sustainability-marketed products, even though such goods accounted for under 17 percent of the market.

Even though sustainable offerings have become more important for consumers, there are still improvement areas to further investigate and encourage sustainable consumer behaviors. Sustainable consumer behavior can be defined as “actions that result in decreases in adverse environmental impacts as well as decreased utilization of natural resources across the lifecycle of the product, behavior, or service” (White et al., 2019, p. 24). Sustainable choices mean taking into account long-term benefits for both you, other people, and the world,

compared to typical consumer decision making focusing only on benefits for consumers only (White et al., 2019).

Companies must be aware of the “attitude-behavior gap” and take into account the potential barriers consumers face when they consider purchasing green products. Even though consumers have an overall positive attitude towards green products and also state that they are willing to pay more for them, companies must try to meet the needs in the market of green products and consequently erase barriers to the adoption of green products (Luchs et al., 2010).

### 1.3 Fish Industry

Sustainability is defined by the Brundtland Commission as development that meets current needs without jeopardizing future generations' needs; in the case of fish, this may be seen as ensuring future stocks (Keeble, 1988).

The contribution of fish to a balanced human diet, the growing world population, higher living standards, and the overall positive image of fish among consumers have all contributed to increased global consumption of fish and derived fish products in recent decades (Brunsø, 2003; Cahu et al., 2004). As a result of the increased demand, the fishing fleet has grown. This, combined with increased fish capture productivity, has resulted in overfishing and the possibility of extinction of certain natural fish stocks, as well as a pressing need for more sustainable fisheries management to restore marine biodiversity and protect fisheries' contribution to food security. Consumers are now being sold farmed fish as an alternative to wild fish due to overfishing of wild fish stocks and rising market demand for fish. Whereas overfishing gave the fisheries industry an unsustainable image, aquaculture has some possible negative environmental externalities. Overfishing of species used to produce fish feed, modification of marine areas and habitats, effluents resulting in polluted water quality, and biodiversity threats from escapees or the use of wild-caught fry or juveniles are only a few examples (M. Lawley et al., 2019; Verbeke et al., 2007).

Fish farming is a somewhat controversial industry (Findlay, 2018; R. S. S. Wu et al., 1994). It employs and creates great value along the entire Norwegian coast and in many communities.

The aquaculture industry accounts for a large share of Norwegian exports and trade surpluses. However, the aquaculture industry still has environmental challenges that need to be addressed. The aquaculture industry is a few decades old, and there are several challenges that must be solved in the future relating to fish escaping, health and animal welfare, climate footprints and discharges into the sea (Scarborough et al., 2014; Skallerud et al., 2021).

A recent documentary published on Netflix, *Seaspiracy*, has shed light on the impact of commercial fishing and the harm the industry does to ocean life, and pours doubt on the idea of sustainable fishing. The documentary concludes that viewers should stop eating seafood, which has made it a controversial documentary. According to several actors within the industry the documentary is based on misleading facts (McVeigh, 2021). However it has started a highly needed debate. As many as 66 percent of marine ecosystems have been severely altered by human actions, according to a report from the UN Panel on Nature (2019). Climate change is leading to acidification and global warming. Pollution has led to so-called dead zones in marine ecosystems.

Approximately 3 billion people have seafood as their main source of protein, often from small-scale fishing and farming. For many coastal communities, seafood is also a job, tradition and culture. However, problematic industrial seafood can be at the expense of small-scale fishing. Therefore, several players in the industry believe that regulation is important, rather than a boycott of seafood. It is difficult for consumers to make conscious choices of fish and seafood in the store today. The information is often insufficient, and there are many factors to consider (M. Lawley et al., 2019).

The Marine Stewardship Council (MSC), the world's leading certification and eco-labelling program for sustainable seafood, uses its eco-label to communicate whether a fish or fish product comes from a sustainable source in order to help consumers. In addition, the MCS provides customers with a "pocket guide" that lists fish from sustainable sources as well as those to avoid. Just five varieties of fish are recommended by Sustain, the alliance for healthier food and farming, to consumers looking to buy for health and sustainability reasons (MSC, 2021).

Although research into seafood sustainability has increased in recent years, it is still in its development area with many questions, such as the role of consumers (Honkanen & Young, 2015; M. A. Lawley et al., 2017; Roheim et al., 2011). Moreover, there is no commonly agreed definition of sustainability for seafood, and the research on the subject is distributed across multiple disciplinary fields (Bolis et al., 2014; Brécard et al., 2009).

### 1.3.1 Fish Consumption in Norway

In light of sustainability, fish has a lower carbon footprint, on average, than other animal proteins (Nijdam et al., 2012; Scarborough et al., 2014), thus making fish a greener alternative than e.g. red meat. The consumption of fish, which is classified by the Norwegian Health organization to be both healthy and sustainable, has over the last years, had a decreasing curve while the meat consumption is increasing (Helsedirektoratet, 2016), and the fish consumption is significantly lower than meat consumption (Helsedirektoratet, 2019). Studies show that while the older Norwegian generation has a stable high seafood consumption, the younger Norwegian generation eats less and less. This especially applies to young people under the age of 34. In this age group, consumption has fallen by 46 per cent since 2012. If the negative trend continues, it could have major consequences for both the industry and public health (Norges Sjømatråd, 2018).

In 2018, every Norwegian ate an average of 74,6 kilos of meat during the year. In comparison, Norwegians ate an average of 29,1 kilos of fish the same year, and fish consumption has decreased by a total of 26 percent in the last five years (Helsedirektoratet, 2019; Lerøy, 2017). According to Norske Spisefakta, Norwegians ate over 50 percent meat for dinner at least three times a week in 2019, while just over 20 percent ate fish food for dinner at least three times a week (Ipsos, 2020). The older part of the population is the most eager fish eaters. Among people over the age of 67, as many as 85 percent eat fish more than twice a week, while for those between the ages of 16 and 24, the proportion is 60 percent (Helsedirektoratet, 2019).

### 1.3.2 Norwegians' Attitude Towards Fish

According to "Ipsos Spisefakta report", fish as a protein source for dinner continues to decrease (Ipsos, 2020). The Norwegian Seafood Council has carried out a number of surveys

which form the basis for saying that many people want to eat more fish, but they are uncertain about how to do it. We live in a time where time constraints are part of everyday life for most people. Full schedules of work, study, children and exercising give people less room to plan and prepare meals. Today's young people have grown up with continental eating habits and easy dishes such as pizza, pasta, tacos and wraps where meat plays an important role. They relate fish with boring everyday food that is both expensive, difficult and time consuming to make (Norges Sjømatråd, 2018).

According to marketing research from Norges Sjømatråd, Norwegians point out sustainability as one of several positive associations to fish compared to other types of meat (Norges Sjømatråd, 2018). According to Kantar's latest reputation survey, it shows that Norwegian seafood has a strong reputation, but many have become more skeptical of the fishing and aquaculture industry in the last two year. The reputation shows a fall for both the fishing and aquaculture industry from 2018 to 2019. A negative image of the industry might cause problems among key stakeholder groups. The society has a strong dedication to the seafood industry, but few people are willing to learn more about it. Moreover, the reports show more skepticism about openness and environmental responsibility in the industry (Norges Sjømatråd, 2020).

## 1.4 Research Project between Lerøy and BI

Lerøy has asked for research about younger consumers' decision-making processes that lead them to purchase environmentally friendly products and shed light on younger consumers' pro-environmental values and attitudes towards fish and their intention to purchase fish. The current research is conducted as a part of a research project between Lerøy and BI, and aims to give valuable insight for both further research and for future marketing business of Lerøy. Lerøy is a world-leading seafood corporation and has been a Norwegian Seafood Pioneer since 1899. The Group's core activities are salmon and trout production, whitefish catching, processing, product development, marketing, sale and distribution of seafood products (Leroyseafood.com, 2020). Lerøy has a varied product range in seafood from Norway, consisting of whole fish, organic salmon, fileets & portions, ready-to-eat meals, ready-to-cook meals, block fish, breaded fish, burgers, and seaweed. The group products are continuously working with environmentally friendly recycling of packaging of their products and Lerøy has

in the past years been rewarded for good, sustainable packaging solutions. Additionally, they strive to leave a low environmental footprint and innovate every part of the value chain. Seafood products leave a low climate footprint in general, however, Lerøy's value chain is one of the world's most sustainable value chains for food production. Further, Lerøy will continue to find solutions to be even more environmentally and sustainable friendly (Lerøy, 2020). This project was initiated by the marketing department at Lerøy, so that Lerøy can become more educated about younger consumers' values and attitudes, ranging from 18-35, and thereby seek solutions to increase the consumption of fish among generation Z and millennials.

## 1.5 Purpose of this Study

The purpose of this study is to build and test an extended **value-attitude-behavior** (VAB) model to examine the consumers intention to fish consumption. Theoretically, we extended our understanding of the VAB-model by examining how environmental consciousness (**value**) influences individuals' attitude toward fish, and attitude towards green food (**attitudes**), affects their intention to fish consumption (**behavior**). Further, the role of age and gender will be investigated as a moderator for the relationships within the VAB-Model. We have chosen to extend the VAB-model by adding social norms as a direct driver for value, attitudes and behavior, whereas age and gender will be investigated as moderators for the relationships between social norms and the VAB-Model.



## 1.6 Research Model

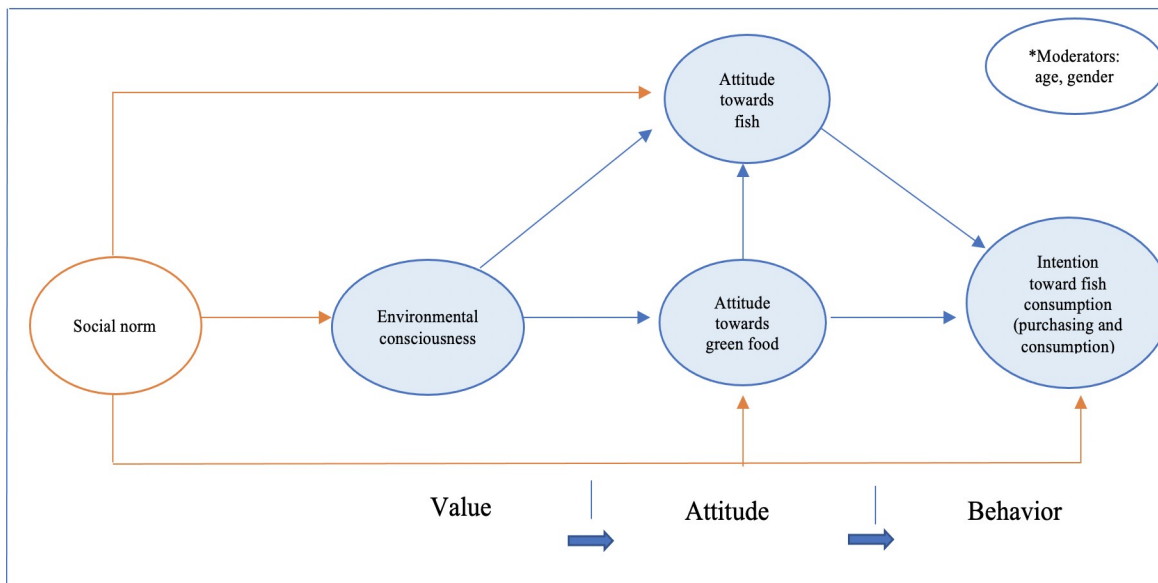


Figure 1: Research Model

\*Moderators will be tested on 7 out of 8 relations in the model as shown in figure 1.

## 2.0 Theoretical background

### 2.1 VAB model

The value-attitude-behavior hierarchy (VABH) of Homer and Kahle (1988) is chosen as the theoretical framework for our research. The VAB model intends to explain the relationships between value, attitude, and behavior, and has been widely used to understand behavior in social psychology studies (e.g. (Honkanen et al., 2006; Kang et al., 2015; Vaske & Donnelly, 1999). Values are structured in a cognitive hierarchy, where values indirectly impact behavior through attitudes (Tudoran et al., 2009). Value is the persistent belief of an individual that a particular mode of conduct is morally or personally preferable (Rokeach, 1973), and is considered to be relatively stable in the course of time (Schwartz, 1994). This guides the behavior of a person towards objects and influences what this individual does (Cheung & To, 2019). Further, an attitude is generally characterized in contemporary social psychology as the assessment of a certain object by an individual (Fabrigar & Wegener, 2010). Attitudes can be

considered as essential behavioral antecedents and are thus an important component of other behavioral models, such as the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) and the theory of planned behavior (TPB) (Ajzen, 1991).

Ever since Homer and Kahle (1988) presented their studies with empirical support of consumers' purchase of natural foods on 831 food shoppers in the United States, the VAB-model has been widely used to explain consumer purchase behavior. The VAB-model can be applied in a broad sense of context and has been used to explain consumer recycling behavior, consumers' healthy food choices in restaurants, Chinese consumers green purchase behavior, and the attitude-behavior gap in the context of sustainable clothing (Cheung & To, 2019; Jacobs et al., 2018; Kang et al., 2015; McCarty & Shrum, 1994).

The environmental responsible behavior model of Hines et al. (1987) proposed that personality factors such as their attitude to environmental issues/practice and locus of control, and knowledge influenced the intent and actual behavior of consumers. With foundation in the VAB-model, green purchase attitude has been found to be the resultant blend of environmental consciousness, knowledge and social norms (Kollmuss & Agyeman, 2002; Mishal et al., 2017; Perrea et al., 2014). Thus, the value-attitude-behavior model (VAB) has been chosen as our theoretical framework developed by Homer and Kahle (1988) for this study.

Our extended VAB-model allows us to examine the possible green gap, given that younger consumers perceive fish as a sustainable product. The decreasing curve of seafood consumption in Norway, underpins the importance of examining whether fish is perceived as sustainable or not (Norges Sjømatråd, 2020). Nijdam (2012) states that seafood on average has a smaller carbon footprint than meat. However the trend is showing that meat is much more consumed by the norwegian population. Hence, there is a possibility of either people not viewing fish as sustainable, not considering sustainability as a factor when buying fish, or not even being as environmentally conscious like previous research has stated.

The extended VAB-model is chosen since there is a gap between consumers' attitudes towards sustainable consumption and the actual purchase behavior in sustainable consumption. By

focusing on the value aspect, we can contribute to the literature in this field to hopefully gain deeper insight into if younger Norwegian consumers are more environmentally conscious than older people, and further if it has any relationship to their attitudes towards green food and fish, which in turn exert an impact on their intention towards fish consumption. Additionally, we investigate whether social norms, friends and influencers, influence younger Norwegian consumers' values, attitudes and behavior.

## 2.2 Values

According to the VAB model, values are critical for explaining attitudes and behavior (Homer & Kahle, 1988). Values have been widely cited as key determinants of behavior in studies on pro-environmental and prosocial behavior (Jacobs et al., 2018). Values underlie value orientations (i.e., patterns of basic beliefs), which influence attitudes and may affect behavioral intentions (Vaske & Donnelly, 1999).

### 2.2.1 Environmental Consciousness

Environmental consciousness has become a human value that represents the appreciation, value judgment, and belief of individuals in mitigating environmental damage (H. Y. Kim & Chung, 2011). It is found that when an individual is more concerned about protecting the environment, the individual has a strong environmental consciousness (Ritter et al., 2015). This concern might influence the attitude of the individual towards environmental issues (Cheung & To, 2019).

Environmental protection has been a major topic in most parts of the world, and people have been interested in environmental issues as well. These environmentally conscious and green consumers are more likely than others to engage in environmentally friendly behavior (Woo & Kim, 2019). Accordingly, Chen and Chang (2012) states that consumers which pay more attention to rising environmental concerns, their behavior can reflect their attitudes toward environmental protection. Moreover, consumer considerations regarding environmental issues and a desire for harmony with nature are a key reason for buying organic food products (Honkanen et al., 2006). Researchers have emphasized that consumer's pro-environmental interest is closely correlated with their overall values of sustainability (Ojea & Loureiro, 2007; Stern & Dietz, 1994; Wesley Schultz, 2001). Furthermore, a study by Bech-Larsen

(1996) suggested that consumers' positive attitudes toward certain brands and products have a strong link to environmental consciousness.

According to research, the stronger a person's pro-environmental mentality, the more likely they are to perform pro-environmental behaviors (Kaiser & Schultz, 2009). In light of sustainability, fish has a lower carbon footprint, on average, than other animal proteins (Nijdam et al., 2012; Scarborough et al., 2014). Additionally, consumption of meat has been identified as the most environmentally harmful form of food consumption (Austgulen et al., 2018), which is why fish is perceived as a greener alternative than e.g. red meat..

Environmental concerns have been identified as one of the determinants of food choice in previous studies. Further, it has been shown that people who perceive themselves as environmentally friendly are more likely to eat fish because they believe it to be a more environmentally friendly choice than other meats (Smith et al., 2017). Thus, we posit that:

***H1:** For those with high environmental consciousness, the attitude towards fish is more positive*

The concern about sustainability is growing globally, and environmental challenges have become a priority in society (Jansson et al., 2010; Nielsen.com, 2015). In purchasing decisions, consumers are more than ever aware of their environmental impact. Additionally, in order to understand and investigate consumer's attitudes, the underlying set of values is important to understand in relation to adopting green food. Studies have shown a significant positive relationship between green food purchase intention and personal attitudes related to environmental protection (Stanić et al., 2014). There is a positive correlation between environmental concern and environmentally friendly behavior, according to several studies (Straughan & Roberts, 1999). The more positive consumers' attitudes toward the environment are, the more likely they are to stop buying from polluting companies and make personal sacrifices to reduce emissions, resulting in more environmentally conscious consumer behavior (Minton & Rose, 1997). Further, research from the nordics has found that ethical and environmental concerns in food production are important customer concerns (Halkier, 1998;

Solér, 1997), and that environmental concerns are one of Norwegian consumer's top reasons for buying organic food. Thus, we posit that:

*H2: Environmental consciousness influences attitude towards green food positively*

## 2.3 Attitudes

Value orientations are considered to have an impact on a person's attitudes (Homer & Kahle, 1988). One of the most significant antecedents for predicting and understanding customer choices across products and services, including food products, is an individual's attitude toward consuming that product (Honkanen et al., 2006).

From the original TPB model from Ajzen (1991), "attitude" is described as "a mental and neural state of readiness, which exerts a directing, influence upon the individual's response to all objects and situations with which it is related," according to Chen & Chai (2010, p. 30). The TPB model shows that a consumer's evaluation of salient beliefs of a product can directly influence the individual's attitudes towards adopting a certain product (Fishbein & Ajzen, 1975). Moreover, attitude has been regarded as one of the most important concepts when studying consumer behavior (Olson & Peter, 1996). Further on, the more favorable the attitude towards the behavior, the stronger the consumer's intention to perform a behavior (Ajzen, 1991).

### 2.3.1 Attitude Towards Fish

In food-related research, positive or negative attitudes have been shown to explain differences in consumption or intention to consume (Shepherd & Raats, 1996). Furthermore, in research on fish consumption, attitude has been found to be the most important variable in determining variance in consumption (Olsen, 2003; Olsen et al., 2007; Rortveit & Olsen, 2007; Verbeke & Vackier, 2005).

The sensory characteristics of fish, such as taste, smell, and texture, are expected to be the main determinants of fish consumption and are also vital to assess the freshness of the product. However, since sensory characteristics are product-specific, studies investigating

these aspects are very difficult to find for a heterogeneous group of food, including both fish and seafood products. For this reason, in many studies, the “attitude towards eating fish” has been used as a measure for sensory perception. An extensive amount of research has been conducted on the expectations that the more positive the consumer’s attitude towards eating fish, the more likely the consumer eats fish. Attitude towards eating fish is, therefore, an important factor and predictor of purchasing fish (Altintzoglou et al., 2011; Birch & Lawley, 2012, 2014; Honkanen et al., 2005; Olsen, 2001, 2003c; Olsen et al., 2007; Rortveit & Olsen, 2007, 2009; Thorsdottir et al., 2012; Trondsen et al., 2004; Verbeke & Vackier, 2005). Additionally, several studies show that people with a positive attitude towards fish choose and eat more fish (Conte et al., 2014; Rortveit & Olsen, 2009). Thus, we propose that attitude toward fish will be an important predictor of both purchasing and consuming fish.

***H3:** A positive attitude towards fish has a positive effect on intention towards fish consumption.*

### 2.3.2 Attitude Towards Green Food

Green food is defined as food that is safe to use, of fine quality, nutritious, takes into account animal welfare issues, and is grown and processed in compliance with the principles of sustainable development (Saleki et al., 2012). Modern society is among other things characterized by a higher level of reflection and consciousness (Beck, 1992; Giddens, 1991). Norwegian consumers have been found to consider the environmental aspects and concerns in their choice of food (Halkier, 1998; Solér, 1997; Torjusen et al., 2001), and that environmental concerns are one of Norwegian consumer’s top reasons for buying organic food.

In line with the increase in vegetarianism, a number of new forms of vegetarianism have also emerged, such as vegetarians, vegans, flexitarians or pescetarians. A pescetarian mainly eats plant based food, but differs from a vegetarian in that they also include fish in their diet. From 2019 to 2020, the proportion of vegans, vegetarians, pescetarians (eating fish) and flexitarians (eating meat occasionally) in Norway has increased from 17 to 23 percent (Ipsos, 2020). Compared to other animal proteins, fish has a lower carbon footprint (Nijdam et al., 2012). Thus, fish is considered as a greener and more environmentally friendly alternative than e.g. red meat.

In relation to green behavior, many studies have identified a positive correlation between attitude and intention (de Lenne & Vandenbosch, 2017; T.-I. Han & Stoel, 2017; Hsu et al., 2017; Kalafatis et al., 1999; Thøgersen & Zhou, 2012). As studies have shown, the majority are positive about sustainable consumption and engage in purchasing products that benefit both the environment and their own social benefits (Mortimer, 2020). Further, green marketing studies have stated that consumers' positive attitude toward green products could influence their purchase intention (Laroche et al., 2001; Wu & Chang, 2015). The research of Yadav and Pathak (2016) asserted that consumer attitude toward green products significantly influences his or her green purchase intention. There is a lack of research about whether a positive attitude towards green food has any correlation with attitude and intention towards fish. Hence, our study will explore if this phenomenon is true when "green purchase intention" is replaced with "intention towards fish consumption". Taking into consideration that the majority of consumers perceive fish as sustainable, there is reason to believe there will be a significant relationship between attitude towards green food and intention towards fish consumption. Hence, we posit:

***H4:** A positive attitude towards green food has a positive effect on intention towards fish consumption.*

Research suggests that among the various motivations to be vegetarian most are related to ethical attitudes, ecological concerns, or health consciousness (Beardsworth & Keil, 1992; Fan et al., 2019). These normative reasons are congruent with pro-social and pro-environmental tendencies, which have been identified as important predictors of positive attitudes and choices of green product consumption. In other words, research supports the positive association between vegetarianism and pro-environmental attitudes and behaviors (E. S. W. Chan & Hawkins, 2010; Choi & Parsa, 2006; H. Han et al., 2010; Hwang & Kandampully, 2015; Salzberg et al., 2019). Additionally studies have shown that a diet rich in red meat can result in over 15 pounds of carbon emissions per day, compared to just 8 pounds from pescetarian and vegetarian diets (Scarborough et al., 2014). Hence, there is a possibility to believe there is a connection between having a positive attitude towards green food and

having a positive attitude towards fish, since several vegetarians that view themselves as environmentally concerned also include fish in their diets. Hence, we posit:

*H5: A positive attitude towards green food has a positive effect on the attitude towards fish.*

## 2.4 Moderators on VAB-model

### 2.4.1 Moderating effect of age and gender

#### *Age*

Age is one important variable in explaining food attitude and food consumption (Axelson, 1986; Nu et al., 1996; Rappoport et al., 1993), and is considered to be an important determinant of seafood consumption behavior (Grunert et al., 1996; Myrland et al., 2000; Olsen, 1989). Furthermore, research has proven a significant positive strong link between age and the level of consumption of seafood in Norway (Olsen, 2003) and green products (Zakersalehi & Zakersalehi, 2012). Based on other studies of Norwegian consumers it has been found that consumption of seafood increased with increasing age (Myrland et al., 2000, Trondsen et al., 2004). Myrland (2000) also indicated older individuals to be more experienced in cooking seafood and therefore had less trouble. They were also more likely to increase the frequency of seafood in the diet of the household.

Moreover, age influences consumers' prosocial or pro-ethical behavior (Panni, 2006), with younger consumers being more concerned with environmental issues than older consumers (Mohd Suki, 2013b). Since the early research on consumer green purchasing behavior, several studies have looked into the factor of age (Zakersalehi & Zakersalehi, 2012). For example, Magnusson et al. (2001) discovered that young consumers, aged 18-25 years, had a more positive attitude towards green food and are more likely to buy a green option than older respondents. According to Ipsos (2020), global warming concerns both younger and older people in Norway, nevertheless, people aged under 40 years old are convinced climate changes are caused by humans. Further, the age group of 15 - 24 years old has the highest proportion of vegetarians in Norway with 7 percent.



## *Gender*

Gender has also been found to have a significant correlation towards the intention to purchase green food. Relating to environmentally conscious consumers, women are found to more often become green consumers since they perceive and are more sensitive to environmental issues (Memery et al., 2005; Stern et al., 1993). Moreover, women, on average, are more health conscious than men (Beardsworth et al., 2002; Fagerli & Wandel, 1999; Kubberød et al., 2002; Verbeke, 2005). According to Verbeke et.al (2005), women have a higher score for both the intention to eat fish and the behavior of fish consumption. Furthermore, in contrast to men, a higher proportion of women consume fish once a week or more. Additionally, Fagerli and Wandel's (1999) states that more women than men were influenced by dietary recommendations and reported dietary changes. Taking into account that consumption of seafood is classified as healthy and sustainable by the Norwegian Health Organization, and are recommended to eat two to three times a week (Helsedirektoratet, 2016).

Additionally, Norwegian women, to a much greater extent, buy more eco-labeled goods than men. Moreover they are also the most concerned with environmentally friendly packaging and production. Norwegian women have also stated to be more willing to buy local products than men. Further, vegetarian and ecological food is more popular among Norwegian women than men, and has had a significant increase in the last five years (Ipsos, 2020). More and more want to avoid eating too much meat, but this opinion is generally more common in Oslo than in the rest of Norway. On the other hand, half of the population in Norway, independent of gender, refrains from buying products from polluting manufacturers, which shows that men also engage in environmentally friendly behavior (Ipsos, 2020).

## 2.5 Social Norm

### 2.5.1 Direct driver on value, attitudes, and behavior

In this paper, social norms are added to the research model and its influence will be investigated in relation to values, attitudes and behavior. Food is no longer just a tool to alleviate hunger or nourish the body; it is also a source of pleasure and a social status symbol (Vittersø & Tangeland, 2015), which is why this study explores whether social norms can

have an impact on people's environmental values, attitudes towards fish and green food, and lastly the intention to consume fish. A social norm is defined as “the perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991, p. 188). Consumer behaviors will be highly influenced by opinions or expectations from others and social pressure can also arise from behavior from others' actions, WOM (Word of Mouth) from family, friends, colleagues, or even strangers or social trends (Hoyer et al., 2020). Furthermore, social norms have an enormous influence on sustainable consumer behaviors, and are defined as beliefs about what consumers feel is socially appropriate and approved in a certain situation (Cialdini et al., 2006; Peattie, 2010).

Social norms are often intended to measure the impact of the social environment, and are frequently operationalized as perceived social pressure or expectations from people in general (subjective norms) or from specific groups or individuals (normative beliefs), together also called injunctive norms (Ajzen, 1991). In order to make it clear in this paper, the term “social norm” will be used as a general explanation of social norms and represent both formats. This definition describes the majority of formal meanings of the social norm, subjective norm, and injunctive norm, as well as a specific social object or set of objects like family, friends, or other reference groups. In this paper, the term “social norms” will be used as a direct factor that may impact individuals' value; environmental consciousness, attitude towards fish, attitude towards green food, and finally the intention toward fish consumption.

In terms of environmental consciousness, people often underestimate the degree to which their actions are influenced by other people's actions and how social norms may contribute to the individual's environmental behavior (Cialdini et al., 2006). The normative influences and the context of people's everyday lives have a significant impact on them. For example, an individual's belief that a particular activity harms the environment or leads to global warming is possibly linked to their belief that other people they regard as valuable share this belief. Moreover, previous research has found evidence of clear links between social norms and pro-environmental actions (S. H. Kim & Seock, 2019). Also, social norms have been identified as an important component of motivation and behavior, as well as a central factor in behavioral influence and change. Despite this, the concept of social norms is still underutilized in the environmental area (Griskevicius et al., 2008; Nolan et al., 2011).

According to several studies the family is the most important social group to influence eating behavior (Verbeke & Vackier, 2005). If someone in the family does not want to eat fish, social norms could compel people not to carry out a specific action, such as not cooking seafood as a family meal (Verbeke & Vackier, 2005). Also, previous research reveals that social norms influence behavioral intention towards sustainable products (Robinson & Smith, 2002). Even though family is believed to be the most important influencer in people's eating behavior, and parents' attitudes and behaviour are children's strongest influence and primary socialisation agents, parental influence is believed to change and probably decline as individuals grow (Gitelson & McDermott, 2006; John, 1999; Pedersen et al., 2015). Secondary socialisation agents such as *friends*, school and media will have a more significant influence on their behavior (K. Chan et al., 2010).

Even though perceived social pressure or expectations can arise from people in general, previous research has identified family as an important social group to influence behavior, this paper focuses only on social norms among *friends* and *influencers* to gain insight into a field that lacks research. As several research has included both family and friends in one variable by writing "my significant others" or "those who are important/close to me, there is no study on friends as one variable. It has been shown that friends' opinions and perceptions, as well as meeting one's group's expectations, are critical in avoiding loss of friends, becoming a loner, or losing one's identity (Page et al., 2006). As this paper studies Norwegians aging from 18 years and above, social norms from *friends* are investigated rather than social norms from family, as this paper takes into account that secondary socialization agents such as friends have a higher influence from those above 18 years (K. Chan et al., 2010; Gitelson & McDermott, 2006; John, 1999; Pedersen et al., 2015).

*Influencers* have a great impact on young consumers in today's society. Influencers and bloggers are relatively new terms and have become an important part of digital marketing strategies, due to their presence and power on social media. Influencers are defined as "a third – party who significantly shapes the customer's purchasing decisions, but may ever be accountable for it", according to Brown & Hayes (2008, p. 50). Celebrities, bloggers and "instagram celebrities" have many young readers who are easy to influence. They are

trendsetters and they can be a voice for important discussions. Since influencers have such a huge impact on their audiences, many companies choose to market their products through these influencers to reach the audience they want - traditional advertising has faced its challenger in the modern media landscape of influencers (Sudha & Sheena, 2017).

Influencers are viewed as knowledgeable, believable, and credible, and a study conducted by The Keller Fay Group found that 82 percent of the respondents would follow the influencer's advice (Berger & Berger, 2016). In addition, it has been found that usage of influencers in promoting brands will increase Return on Investment (ROI) up to 11 times more compared to traditional marketing. Consumers who got exposed for influencer marketing, had a significantly higher purchasing rate than those who did not get exposed for influencer marketing, and instead were exposed to traditional online marketing (Tapinfluence, 2015).

Companies today invest money on influencer marketing, by recommendations and promotions of products on influencer's digital platforms to reach a huge audience (Sudha & Sheena, 2017). Unlike traditional marketing, such as TV commercials, influencer marketing is a special form of marketing as followers voluntarily follow influencers and their content, which is why marketers today see the potential sales value in good recommendations. SMIs (Social Media Influencers) are a new breed of third-party endorsers who use social media to form and influence people's attitudes and perceptions. SMIs have had a significant effect on customer engagement and relationships in the marketing field. SMIs can be useful in persuading the public to follow environmentally friendly behavior. In the area of sustainable consumption, there is little research on SMIs, nevertheless, influencers significantly influence on consumer's purchasing decisions along with their power and presence on social media is the reason for why this will be explored in light of environmental consciousness, attitude towards fish and green food, and intention towards fish consumption (Okuah et al., 2019).

In this study, the hypothesis will therefore test the influence of social norms from *friends* and *influencers*. Hence, we hypothesize:

**H6a and b:** *Social norms (friends and influencers) have a positive effect on environmental consciousness*

**H7a and b:** *Social norm (friend and influencers) have a positive effect on attitude towards fish*

Looking further at social norms in relation to green products, many researchers have identified social norms to be an important factor for intention to adopt green products. Firstly, the global market of green food is experiencing a strong positive trend in green purchasing and the trend is predicted to increase in years to come (Salleh et al., 2010). In addition, a study using the TPB model with investigating organic food consumption in five different countries, the result was that social norms along with personal attitudes were important drivers of organic food consumption (Nuttavuthisit & Thøgersen, 2015). Similarly, two other green studies show that social norm is an important determinant to the intention to purchase green household products and in general, green products (Arli et al., 2018; Sreen et al., 2018). Furthermore, the statistics from chapter 1.2.1 *Increased Focus on Sustainability*, also show that green alternatives are not adopted by many consumers. Social norms can influence consumers to adopt greener intentions, if choosing greener alternatives is presumably the favorable social way to behave among friends and influencers. A study conducted by Kim et al. (2012), found that the relationship between green identity and buying intentions is mediated by social norms. Hence, we posit that:

**H8a and b:** *Social norm (friends and influencers) have a positive effect on attitude towards green food*

Social norms play an important role for an individual's behavior (Ahn et al., 2020). We argue that the stronger the norms are that individuals perceive from friends and influencers, the more likely they are to behave in a particular way.

**H9a and b:** *Social norms (friends and influencers) have a positive influence on intention towards fish consumption*

## 2.6 Moderators on Social Norm

### 2.6.1 Moderating Effect of Age and Gender

#### *Age*

Green consumption primarily appeals to the consumer who engages in environment-friendly behavior, generally known as reducing excessive consumption (S.-T. Lin & Niu, 2018).

Younger consumers seek more sustainable products and brands, and are more engaged in behaving environmentally friendly. Further, younger people are more likely to comply with social pressure and adopt behaviors in order to fit in with a group (Culiberg & Elgaaied-Gambier, 2015). For generation Z and millennials, there is a clear intention to find out more about environmentally friendly lifestyles. These generations are also more likely to be inspired to pursue a more sustainable lifestyle by online influencers or celebrities (Globescan, 2020).

#### *Gender*

Women have higher levels of pro-environmental values and attitudes, according to research, and engage more in pro-environmental behavior than men (Hunter et al., 2004). A study by Trelohan (2021) shows that this is due to social expectations. As we tend to surround ourselves with people that are alike us, it will therefore be more likely that women are more surrounded with others that are more engaged in pro-environmental behavior. Looking into influencers influence on women and men, the different platforms in which the influencers operate will be of interest. Instagram is the most used platform for influencers, which underpins our reason for using gender as a moderator, as women compared to men spend 60 percent more time on Instagram (Statista, 2020). Further, according to a report from Deloitte about Norwegians' habits on social media, women list food accounts as their most visited category on Instagram (Deloitte, 2020). To give an example, among women under 30 with a profile on Instagram, 1 in 5 respond that they follow profiles within the category «Grocery» on Instagram (Holmefjord, 2020). Furthermore, food accounts are the most popular type of category to follow on Instagram for Norwegian people (Deloitte, 2020).

## 2.7 Behavior

Intention represents “a wilful state of choice where one makes a self-implicated statement as to a future course of action” (Bagozzi, 1983, p. 145). According to Fishbein & Ajzen (1975), intention is the most immediate determinant of behavior, and therefore, the most explained predictor of engaging in a specific behavior (Hsu et al., 2017). Intention is considered as a reliable predictor for revealing actual behavior, since the intention indicates how much effort individuals are willing to exert in order to perform a behavior (Ajzen, 1985, 1991; Hsu et al., 2017).

### 2.7.1 Intention Towards Fish Consumption

Several studies show that intentions are reasonable predictors of specific behaviors when adequately measured and under the individual's sole control (Armitage & Conner, 2001). Thus, this study explores if environmental consciousness as a value has an effect on the attitude towards fish and green food, and further if those attitudes have any influence on consumers' behavioral intentions. Further, behavioral intention in this study is viewed as the intention towards fish consumption (purchase and eat fish). In light of several green studies, the majority have applied the intention to purchase or adopt green products as the dependent variable in their research model (Sørensen & Voll, 2018). Therefore, using intention towards fish consumption as our dependent variable in our research model seems sufficient.

## 2.8 Overview of Hypothesis

### **VAB-Model**

**H1:** *Environmental consciousness influences attitude towards fish positively*

**H2:** *Environmental consciousness influences attitude towards green food positively*

**H3:** *A positive attitude towards fish has a positive effect on intention towards fish consumption*

**H4:** *A positive attitude towards green food has a positive effect on intention towards fish consumption*

**H5:** *A positive attitude towards green food has a positive effect on the attitude towards fish*

**Social Norm**

**H6a and b:** Social norms (friends and influencers) have a positive effect on environmental consciousness

**H7a and b:** Social norms (friends and influencers) have a positive effect on attitude towards fish

**H8a and b:** Social norms (friends and influencers) have a positive effect on attitude towards green food

**H9a and b:** Social norms (friends and influencers) have a positive influence on intention towards fish consumption

**2.9 Research Model with Hypothesis**

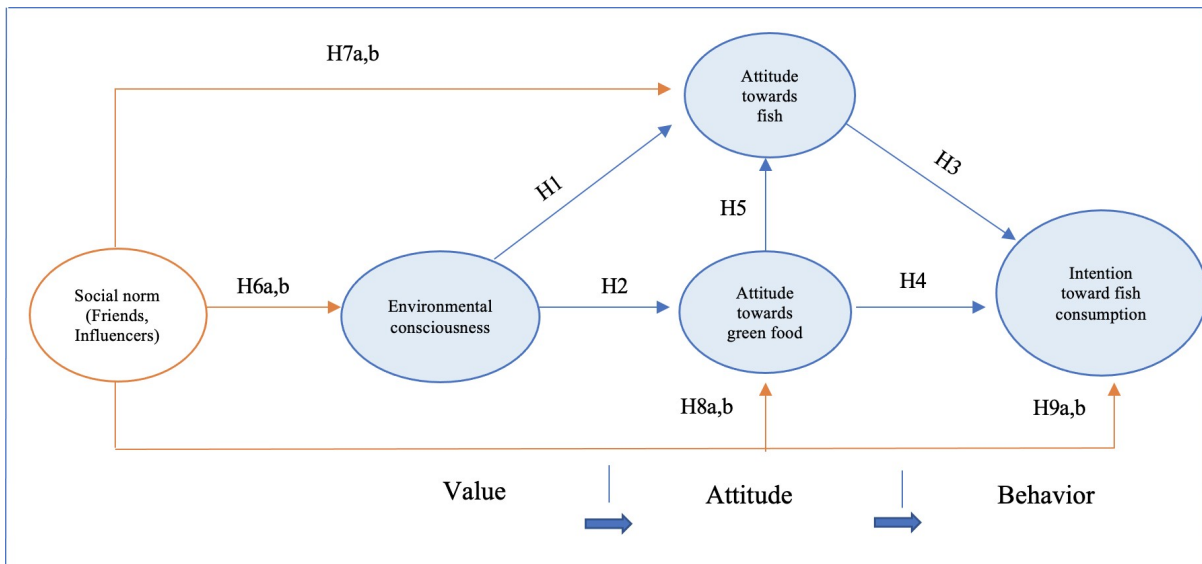


Figure 2: Research Model with Hypothesis

**3.0 Research Methodology**

**3.1 Research Design**

A suitable research design is needed in order to provide valid answers to the research questions outlined in Chapter 2. The research design is a comprehensive plan for addressing the hypothesis (Saunders et al., 2016). To address the hypothesis, a deductive approach was used, and quantitative data was collected to test the hypotheses. According to Saunders et al.



(2016), the survey is strongly correlated with a deductive approach and allows for an efficient collection of structured data from a pool of respondents.

Furthermore, in this paper we plan to explore consumers' intentions today rather than assessing progress over time. As a result, we chose a cross-sectional study for our data collection because it allows us to produce a representative result of the population, and provides us with a fast “snapshot” of today's situation (Saunders et al., 2016). By using the official survey software tool recommended by BI, Qualtrics, to collect data, an online self-reported questionnaire was developed. The software program allows us to transfer the data file in SPSS for further data analysis. Using a survey in our research is a reasonable solution that will enable us to more reliably compare our findings to established literature. Therefore, using a survey helps us to maintain control over the research process while still allowing us to gather a significant volume of data from our target population in a cost-effective manner (Saunders et al., 2016).

## 3.2 Population and Sample

The norwegian population was identified as our target group, as this research study aims to explore consumer intention to fish consumption using the extended VAB-model. Further, our collaboration with Lerøy involves gaining a deeper understanding of younger consumers' decision-making process in relation to their values and attitudes. Therefore, our primary target group is 18 - 35 year old Norwegians. However, in order to study this group, a secondary group, mainly older consumers above 35 years old ranging up to 70 years old is needed for comparison. The comparison allows us to explore potential differences in values and attitudes among these groups in our data collection. Further, the role of age and gender will be investigated as a moderator of intention towards fish consumption, which gives us the opportunity to explore if there exist any attitude behavior gap.

## 3.3 Pretest

Before distributing the survey, a pretest was presented for nine respondents to confirm that the survey was perceived as intended. We selected respondents from our private network, ranging from 19 - 62 years old (5 male and 4 female), considering our primary and secondary target

group. The respondents were served the questionnaire through a Qualtrics link used for pretest only, maintaining anonymity. Our supervisor also tested the pretest. The participants had few inputs on the pretest. The result was some adjustments in the questionnaire, such as sentence structure, language, and usability. Additionally, the questionnaire consists of some repetitive questions, that mostly the older participants raised concern about, wondering whether the same questions came repeatedly. Consequently, we aimed to divide these questions logically and added definitions of "influencers" as the term is not so familiar among the older population.

### 3.4 Data Collection Procedure

In the period from 26 March and until 15 April, the online survey was conducted among our target groups through a Qualtrics-link using our social internal platforms to share the link. With the help of Qualtrics setting, the responses to the survey were fully anonymized: the collection of IP addresses was disabled. Furthermore, the only personal data obtained was gender, age, income and county making it impossible to track down a respondent. The surveys start off with an introduction, with appreciating respondents' contribution and time, but also to confirm that their answers will be anonymous.

In order to get the most respondents possible, and especially among the older population, our supervisor sent an email to several BI employees encouraging them to complete the questionnaire. Further on, we posted the survey link with additional information about the research study on our Facebook page, our parents Facebook pages and in several relevant Facebook groups, both public and private (Facebook groups: DN Kvinner, Av Jenter for Jenter, Moneypenny Norge, Grønt Folkevett, Politisk ungdom, Økonomi og administrasjon BI 2016-2019).

#### 3.4.1 Data Cleaning

In total, 569 respondents, according to Qualtrics, were registered as participants in our survey. Of these, 152 did not complete the survey. Therefore, a total of 417 respondents completed all the questions in the survey.

We discovered a significant number of respondents with missing data when we analyzed the responses. We chose to transfer the datafile with all 569 respondents to SPSS, in order to screen and clean all respondents. Those respondents that completed the questions regarding our main VAB-model were considered as reliable. Participants with less completion of the questionnaire were deleted from the dataset, as they had not completed the task satisfactory. By manually going through the dataset, we were able to control every respondents completion rate.

Arithmetic mean imputation was used to substitute missing values in this dataset, which is a single imputation process in which the missing value on a variable is replaced by the arithmetic mean of the available instances. Mean imputation is useful since it provides a full dataset, but it also reduces data uncertainty since it imputes values across the distribution's core (Enders, 2010). In addition, we decided that for the factors to be valid, each respondent had to answer at least 75 percent of the questions belonging to the different factors. By doing so, we ensured a higher respondent level, but also took into account that each respondent has answered enough to give value for further analysis. After careful and precise cleaning of the dataset, we ended up with 452 valid respondents to use in data analysis in SPSS.

### 3.5 Measures

The conceptual model consists of five constructs where three of them are well-established concepts in the research field. Throughout the survey, a seven-point likert scale with end-points, “strongly disagree/strongly agree”, was used to answer all of the questions. Our questions were developed with reference to the theoretical background (*chapter 2.0*). Table 2 contains all questions included in the survey that was given to the respondents. Excluded questions can be seen in Appendix A. Prior to the main section of the survey, we measured demographics; age, gender, income and county.

#### Value

##### *Environmental consciousness*

Environmental consciousness measures individuals values and is based on several green studies (Jonell et al., 2016; P.-C. Lin & Huang, 2012; Ritter et al., 2015). The general environmental consciousness statements are identical and adapted from well developed green

studies; “When I have a choice between two equal products, I purchase the one less harmful to other people and the environment.” (P.-C. Lin & Huang, 2012), “Do you perceive yourself as an environmentally conscious person?” (Jonell et al., 2016) and “Caring about the planet's future” (Ritter et al., 2015). Additionally, other statements regarding environmental consciousness related to the fish farming industry and fish in general as a sustainable product were developed, benefiting from previously developed scales and measures in the literature (Clonan et al., 2012; Honkanen & Ottar Olsen, 2009). Small adjustments were made to ensure the relevance for Norwegian consumers and to keep them simple and clear. However, since we did not fully copy a scale for the questions regarding fish and fish farming, we expect the reliability and validity to be affected. To sum up, environmental consciousness (EC) is divided into three different aspects; EC General, EC fish, and EC fish farming.

### *Attitude*

Concerning the attitudes, measures of the attitude towards fish as well as the attitude towards green food were adapted from Osgood et al (1957), and included “Min totale holdning til fisk/bærekraftig mat er positiv, Min oppfatning av fisk/bærekraftig mat er fordelaktig, Jeg assosierer noe positivt ved fisk/bærekraftig mat” (“My attitude towards fish/green food is positive, “My perception of fish/green food is advantageous”, “I associate something positive with fish/green food”) – that shows different characteristics of the subjects’ attitude. The adjectives used in the questions were also similar to those used by (Osgood et al., 1957).

### *Behavior*

Two different items were applied to measure the dependent variable. To measure intention towards fish consumption, we included questions of both purchasing and consuming fish, based on theoretical grounding. Thus, participants were asked answer the following questions “Jeg er positiv til å kjøpe fisk”, “Jeg er sterkt for (villig til) å kjøpe fisk”, “Jeg er positiv til å spise fisk” (“I am positive about buying fish”, “I am strongly in favor of (willing to) buy fish”, “I am positive about eating fish”) - a seven point ordinal Likert scale was employed and used by respondents to evaluate to which degree they agreed to the statements, from “very unlikely” to “very likely”. For clarity, intention towards fish consumption contains both the intention towards *purchasing* and *eating* fish. To measure intention to consume a questionnaire was adopted from Ajzen (2002) and Arvola et al. (2008).

### *Social norm*

Measurements of social norm from Skallerud et.al (2021) are almost identical to our questions regarding social norm and are adapted to the subject of the research, namely friends and influencers. The questions from Skallerud et.al (2021) are “People who are important to me want me to eat fish regularly”, “People who are important to me expect that I eat fish regularly”, and “People who are important to me encourage me to eat fish regularly”.

### *Moderators*

Age and gender was added as moderators by creating dummy variables. To check if they had any interaction effect we used PROCESS macro in SPSS by Andrew F. Hayes (Hayes, 2013). Based on the literature reviewed in Chapter 2.4.1 and 2.6.1, age and gender were identified as important moderators to explore regarding environmental consciousness, attitude towards fish and green food, and intention towards fish consumption. Younger (18-35 years) was coded as 1, and older was coded as 0. Women were coded as 1, while men were coded as 0.

## 3.6 Descriptive Statistics

The final sample (N=452) was predominantly female (69,9 percent female, 30,1 percent male). Respondents under 35 years old are representing 51,6 percent and respondents over 35 years old are 48,4 percent. Table 1 shows the summary of the demographic statistics, gender and age, for the final sample.

*Table 1: Sample Demographics. N=452*

Age		Gender	
Under 18	1,10 %	Woman	69.9%
18-24	27,00 %	Man	30.1%
25-35	23,50 %		
36-45	9,50 %		
46-55	21,20 %		
56-70	16,60 %		
Over 70	1,10 %		

Table 2 represents the descriptive statistics from the exploratory analysis. The table illustrates the sample size (N), factor loadings, SD, mean, measures of skewness and kurtosis for each question, and Cronbach's alpha for each factor. The descriptive statistics show that the standard deviations are high for all variables, namely all being greater than 0 (SD = [1.06–1.70]). Looking at skewness and kurtosis, which captures the distributional aspects, we used the rule of thumb with value of skewness of +/- 1 and kurtosis of +/- 2 (George & Mallery, 2010). In our case, skewness is  $\leq 0.08$  and kurtosis  $\leq 2.44$ , which do not indicate any distributional problems. There are only two values under -1 on skewness, namely -1.52 and -1.65, and two values over 2 on kurtosis. There might be problems related to skewness and kurtosis values  $>1$ , however, our sample size is considered large (N=452) and higher levels of skewness and kurtosis [2, 10], will therefore be limited (Sharma et al., 1989). Due to our sample size, we presume that there are no serious distributional problems.

Our data was treated as ordinal measures, as we used seven-point Likert scales. No serious distributional problems were detected on the distributional aspects through skewness and kurtosis. By using robust maximum likelihood we corrected for non-normality in the data (Jöreskog & Sörbom, 1993).

Table 2: Descriptive Statistics

Factors	Questions	Comp. st. Loadings	Mean	SD	N	Skewness	Kurtosis	$\alpha$
<b>Environmental Cons.</b>								
<i>EC General</i>	Q11_1 "Jeg er bekymret for planetens fremtid med tanke på miljøet."	.737	5.28	1.49	446	-.868	.520	.759
	Q11_2 "Hvis jeg blir oppmerksom på at en bedrift skader miljøet, slutter jeg å kjøpe produktene deres"	.720	4.98	1.40	446	-.605	.082	
	Q11_3 "Ved valg mellom to like produkter, kjøper jeg det som er minst skadelig for miljøet"	.752	5.24	1.42	446	-.564	.035	
	Q11_4 "Jeg ser på meg selv som en miljøbevisst person"	.825	4.83	1.23	446	-.330	.257	
<i>EC Fish</i>	Q11_1.0 "Det er mer bærekraftig å spise fisk enn kjøtt"	.823	5.06	1.53	444	-.879	.312	.667
	Q11_4.0 "Jeg anser fisk som en bærekraftig råvare"	.893	5.24	1.60	444	-.572	.018	
<i>EC Fish farming</i>	Q32_1 "Oppdrettsnæringen forurensrer havet"	.855	4.82	1.41	446	-.112	-.269	.831
	Q32_2 "Oppdrettsnæringen kaster for mye fisk"	.838	4.76	1.29	446	.251	-.123	
	Q32_3 "Lusegift og medisiner som blir brukt mot lakselus i oppdrettsnæringen truer det marine økosystemet"	.892	5.18	1.36	446	-.301	-.455	
<b>Attitude</b>								
<i>Attitude Fish</i>	Q13_1 "Min totale holdning til fisk er positiv"	.822	5.89	1.52	446	-1.66	2.37	.919
	Q13_2 "Min oppfatning av fisk er fordelaktig"	.686	5.52	1.50	446	-.993	.707	
	Q13_3 "Jeg assosierer noe positivt ved fisk"	.819	5.89	1.42	446	-1.63	2.46	
<i>Attitude Green Food</i>	Q17_1 "Min totale holdning til bærekraftig mat er positiv"	.778	5.87	1.17	445	-.857	.049	.870
	Q17_2 "Min oppfatning av bærekraftig mat er fordelaktig"	.778	5.55	1.26	445	-.517	-.305	
	Q17_3 "Jeg assosierer noe positivt ved bærekraftig mat"	.741	5.97	1.20	445	-1.18	1.16	
<b>Intention</b>								
<i>Intention Fish consumpt.</i>	Q15_1 "Jeg er positiv til å kjøpe fisk"	.834	5.91	1.54	446	-1.64	2.20	.933
	Q15_2 "Jeg er sterkt for(villig til) å kjøpe fisk"	.774	5.71	1.63	446	-1.32	1.02	
	Q16_1 "Jeg er positiv til å spise fisk"	.662	5.93	1.62	446	-1.77	2.46	
	Q16_2 "Jeg er sterkt for(villig til) å spise fisk"	.776	5.92	1.53	446	-1.69	2.43	
<b>Factors</b>								
<b>Social norm</b>								
<i>SN Friends Environment</i>	Q18_1 "Venners råd om å være mer bevisst på miljøet påvirker meg"	.871	5.03	1.46	438	-.610	1.02	.943
	Q18_2 "Venners forventninger om å være mer bevisst på miljøet påvirker meg"	.856	4.82	1.52	438	-.523	-1.44	
	Q18_3 "Venners oppmuntringer om å være mer bevisst på miljøet påvirker meg"	.844	5.00	1.48	438	-.694	.279	
<i>SN Influencer Environment</i>	Q19_1 "Influencer sine råd om å være bevisst på miljøet påvirker meg"	.945	3.06	1.74	437	.235	-1.03	.978
	Q19_2 "Influencer sine forventninger om å være mer bevisst på miljøet påvirker meg"	.928	2.96	1.70	437	.313	-.885	
	Q19_3 "Influencer sine oppmuntringer om å være mer bevisst på miljøet påvirker meg"	.952	3.11	1.75	437	.231	-.972	
<i>SN Friends Green Food</i>	Q20_1 "Mine venner vil at jeg skal spise bærekraftig mat"	.814	3.95	1.38	437	-.219	.524	.915
	Q20_2 "Mine venner forventer at jeg skal spise bærekraftig mat"	.858	3.62	1.44	437	-.207	-.042	
	Q20_3 "Mine venner oppmuntrer meg til å spise bærekraftig mat"	.870	3.74	1.44	437	-.257	-.051	
<i>SN Influencer Green Food</i>	Q21_1 "Influencer vil at jeg skal spise bærekraftig mat"	.832	3.65	1.40	435	-.324	.340	.929
	Q21_2 "Influencer forventer at jeg spise bærekraftig mat"	.796	3.59	1.38	435	-.375	.283	
	Q21_3 "Influencer oppmuntrer meg til å spise bærekraftig mat"	.750	3.59	1.44	435	-.337	.048	
<i>SN Friends Fish</i>	Q22_1 "Mine venner vil at jeg skal spise fisk"	.849	4.15	1.38	431	-.364	.696	.916
	Q22_2 "Mine venner forventer at jeg skal spise fisk"	.816	3.96	1.44	431	-.340	.401	
	Q22_3 "Mine venner oppmuntrer meg til å spise fisk"	.824	4.03	1.40	431	-.309	.589	
<i>SN Influencer Fish</i>	Q23_1 "Influencer vil at jeg skal spise fisk"	.779	3.46	1.30	420	-.536	.433	.941
	Q23_2 "Influencer forventer at jeg skal spise fisk"	.800	3.38	1.28	420	-.719	-.045	
	Q23_3 "Influencer oppmuntrer meg til å spise fisk"	.771	3.40	1.33	420	-.477	.013	
<i>SN Friends int. Fish cons.</i>	Q30_1 "Mine venner påvirker meg til å kjøpe fisk"	.792	3.56	1.56	415	-.285	-.478	.954
	Q30_2 "Mine venner påvirker meg til å spise fisk"	.783	3.66	1.58	415	-.294	-.395	
<i>SN Influencer int. Fish cor</i>	Q31_1 "Influencer påvirker meg til å kjøpe fisk"	.886	2.66	1.52	411	.038	-1.30	.976
	Q31_2 "Influencer påvirker meg til å spise fisk"	.875	2.79	1.50	411	.000	-1.25	

## 3.7 Data Analysis

The study's validity and reliability were assessed prior to hypothesis testing, and a factor analysis was used to determine construct validity. The factor analysis helps us to uncover any potential patterns between the variables and the study's validity and reliability. Through factor analysis, we can see if the dataset can be explained through one or more underlying factors, and thus be used to simplify data material (Johannessen, 2009). The analysis confirmed that several of our factors were correlated. Reliability was investigated in relation to whether the results are stable and consistent when repeated established measurements are made (Malhotra, 2010). This study has used mostly established measurements scales and adapted the scales to our topic, in order to secure a high reliability (*chapter 3.5*). Internal consistency reliability was analyzed using Cronbach's alpha (*chapter 3.7.1*).

We have used linear multiple regression to test whether there are significant correlations between the variables. The degree of explanation,  $R^2$ , tells us how much of the variation in the dependent variable can be explained through the model. By looking at the p-value and the beta coefficient of the independent variables, we can determine whether there is a causal relationship or not, and whether this effect will be zero (Saunders et al., 2016).

### 3.7.1 Exploratory Factor Analysis

In this chapter we aim to describe the process of developing factors, and present the factors used in later data analysis. The factor analysis is a general name denoting a class of procedures primarily used for summarization (Malhotra, 2010, p. 604). The purpose of the factor analysis was to group variables measuring similar topics, as discussed in *3.5 Measures*, and to explore correlations between variables for our research model affecting the dependent values. To begin, we used SPSS 27 to run an exploratory factor analysis that included all of the items from the five constructs in order to get a sense of the overall research model. We used maximum likelihood to extract factors, and oblimin, a rotation technique that allows the factors to be combined, since we assumed there was correlation between them (Pallant, 2011).

The exploratory factor analysis provided us with a Principal Component Analysis (PCA). The communalities indicated which variables to include or potentially exclude in our data for further analysis. The PCA revealed overall high communalities, indicating that the extracted



components represent the variables well (Saunders et al., 2016). However, one variable, namely “Det er mer bærekraftig å spise fisk enn kjøtt” (“Eating fish is more sustainable than meat”), with an extraction of .466 is lower than we normally would have accepted. Due to its relevance for our topic we chose to look at the pattern matrix and found that it did not load on any factors. We then did an Exploratory Factor Analysis (EFA) to see if there could be any good fit where the question had loading above .60, which we were able to achieve as it ended up loading at .823. In addition, the final correlation matrix with our 14 factors revealed that this question correlated with several important aspects, such as environmental consciousness, attitude towards fish and green food, and intention towards fish consumption (see Appendix B)

The next step was to decide the numbers of factors, and theoretically this is determined by having an eigenvalue greater than 1.0. Thus, when determining factors, we set the eigenvalue to greater than 1.0. By looking at the pattern matrix, we investigated how the eleven factors loaded and their reliability. Factor loadings exceeding 0.7 are considered as reliable measures (Hair et al., 2006). However, if there are other measures supporting good construct validity for the model, the reliability of the measurement items might be sufficient for factor loadings between 0.6 and 0.7 (Hair et al., 2006).

After a thorough analysis of the exploratory factor analysis, we ended up with fourteen factors, see table 2. Moreover, an explanation of how factors were developed will be presented. We tested the reliability of our adopted scales to guarantee that the internal consistency was still high, despite earlier researchers having confirmed the reliability of the scales used for the main survey. Environmental consciousness for each factor has an coefficient alpha ( $\alpha$ ) of = 0.759, ( $\alpha$ ) of = 0.667, ( $\alpha$ ) of = 0.831, and Attitude towards fish equals ( $\alpha$ ) of = 0.919, ( $\alpha$ ), Attitude towards green food equals ( $\alpha$ ) of = 0.870, Intention towards fish consumption ( $\alpha$ ) of = 0.993, and lastly Social norm ranging from ( $\alpha$ ) of = [0.915–0.978]. Overall, the alpha values are ranging from 0.667 to 0.978. According to Hair et al. (2006), values exceeding the minimum requirement of 0.7, indicates a satisfactory internal consistency reliability.

Factor descriptions with following factors and questions can be seen in Table 2, along with Cronbach's alpha ( $\alpha$ ).

### *Environmental consciousness*

The pattern matrix revealed some issues regarding the value construct of our study. The environmental consciousness construct in our research model is considered as one construct (see Figure 1). The construct intends to measure the value aspect on three levels; environmental consciousness in general, environmental consciousness regarding fish and environmental consciousness regarding fish farming. Additionally, environmental consciousness questions, as described in chapter 3.5 *Measures*, are inspired by similar research and some questions are adapted and developed for its relevance to this study. The original pattern matrix regarding EC identified four factors for the value construct, including one question that was not included in any of the factors. Q11\_5, “Det er viktigere at jeg får i meg fisk jevnlig fremfor hvor bærekraftig fisken er produsert” (“It is more important to consume fish, rather than how sustainable the fish is produced”, loaded at .733 in the principal component analysis. However, after conducting the pattern matrix, we saw that question Q11\_5 was placed with Q11\_4.0 “Jeg anser fisk som en bærekraftig råvare” (“I consider fish to be a sustainable commodity”), which is conflicting with the purpose of Q11\_4.0. Some of the items intending to measure EC show factor loadings in the pattern matrix ranging from .428 to .876. Since some of the questions loadings were under 0.6, we therefore removed five questions, namely Q11\_2.0, Q11\_3.0, Q11\_5, Q32\_4, Q32\_5 (see Appendix A).

Further, we wanted to structure the value construct in our analysis, using an exploratory factor analysis to develop three factors. The result was three factors, each one representing different aspects regarding environmental consciousness, all loading above .70, but one loading at .626 (see Table 2). Since most of them were above .70, we concluded that this measurement item would be sufficient since it is supporting good construct validity for the model (Hair et al., 2006). Moreover, this factor analysis confirmed that EC consisted of three different factors as intended, see chapter 3.5 *Measures*. First, EC General, which contains questions regarding environmental consciousness in general. Second, EC Fish, including questions regarding fish as a sustainable resource of protein. Lastly, EC Fish farming, containing questions regarding fish farming and its negative impact on aquaculture. Therefore, EC General is the most important factor to consider throughout the analysis as it tells more about whether a person is environmentally conscious or not. Questions for each factor, and factor loadings can be seen in Table 2, *Descriptive Statistics*.

### *Attitude and behavior*

The first exploratory factor analysis we conducted, including all items, suggests that attitude towards fish and intention towards fish consumption to be one factor. Since attitudes are considered as essential behavioral antecedents and are an important component for explaining behavior, we decided to divide this factor into two distinct factors (Ajzen, 1991; Fishbein & Ajzen, 1975). As expected, by running these two items through a fixed number of factors of 2, the factor loadings show great reliability for both attitude towards fish and intention towards fish consumption. One of the components loaded greater than 1, however the factors are highly correlated, thus the factor loadings are regression coefficients and as such they can be larger than one in magnitude (Jöreskog, 1999). As intended, attitude towards fish, attitude towards green food, and intention towards fish consumption behavior were separated into three factors, see table 2 for questions to each factor.

### *Social norm*

The same method was applied for social norms where questions regarding influencers and their impact (encourage, expects and desire) on attitude towards fish and green food. This had to be separated, as friends' impact on attitude towards fish and green food was recognized as two distinct factors in the exploratory factor analysis.

In addition, there were two questions that cross-loaded, namely two questions regarding friends' influence on purchasing and consuming fish. However, when examining each variable's communality to assess whether the variables meet acceptable levels of explanation, we see that these question's loadings are .791 and .798, and are therefore viewed as sufficient. The Social Norm aspect consists of eight distinct factors, as social norms is expected to have a driver on value, attitude and behavior (see Figure 1)

Further, the final number of eight factors for Social Norm is divided into influencers and friends separately for each aspect, environmental consciousness, attitude towards fish and green food and intention towards fish consumption, see table 2 for questions to each factor.

### 3.7.2 Correlation Matrix

After the variables were constructed in the factor analysis, we conducted a correlation matrix. The correlation matrix reveals whether there is a connection between different variables. The degree of correlation is shown by means of a correlation coefficient with a value of +/- 1, where 1 expresses perfectly positive correlation, while -1 indicates that the variables pull in the opposite direction of each other. Based on the correlation matrix, we could therefore get indications of whether our hypotheses were correct, as well as check for multicollinearity. Multicollinearity is when we have independent variables that are strongly correlated, which makes the variables less suitable for regression analysis (Johannessen, 2009). In our case, there were many variables that correlated with each other. The Correlation Matrix can be seen in table 3 and will be discussed in *4.0 Results*.

Table 3: Correlation Matrix

Correlations		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. EC General															
2. EC Fish		.13**													
3. EC Fish farming		.23**	-.17**												
4. Attitude Fish		.03	.67**	-.13**											
5. Intention Fish consumpt.		.02	.63**	-.14**	.88**										
6. Attitude Green Food		.56**	.31**	.15**	.24**	.21**									
7. SN Friends Environment		.51**	.22**	.22**	.11*	.10*	.48**								
8. SN Influencer Environment		.24**	.00	.05	-.11*	-.10*	.19**	.43**							
9. SN Friends Green Food		.31**	.22**	.05	.14**	.14**	.32**	.45**	.22**						
10. SN Influencer Green Food		.13**	.13**	-.07	.11*	.13**	.14**	.18**	.32**	.25**					
11. SN Friends Fish		.12**	.26**	.01	.28**	.29**	.22**	.31**	.11*	.52**	.30**				
12. SN Influencer Fish		.16**	.18**	-.04	.16**	.20**	.14**	.20**	.22**	.26**	.68**	.36**			
13. SN Friends int. Fish cons.		.17**	.26**	.04	.23**	.28**	.18**	.34**	.12*	.53**	.30**	.66**	.35**		
14. SN Influencer int. Fish cons.		.075	.21**	-.037	.15**	.20**	.116*	.261**	.345**	.34**	.42**	.34**	.54**	.55**	

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

### 3.7.3 Multiple Regression Analysis

Multiple regression is a more sophisticated form of correlation that is used to investigate the predicting ability of a set of independent variables on a single continuous dependent measure (Pallant, 2011). In order to test all hypotheses, a multiple linear regression was used to analyze the data. We have used linear multiple regression to test whether there are significant correlations between the variables. The degree of explanation tells us how much of the variation in the dependent variable can be explained through the model. By looking at the

p-value and the beta coefficient of the independent variables, we can determine whether there is a causal relationship or not, as well as whether this effect will be zero (Saunders et al., 2016).

We used regression analysis to test the hypotheses in the study. In order to be able to use linear regression, there are four assumptions that must be met (Saunders et al., 2016). We decided to remove six outliers with residual between -3.3 and 3.3, since these values are categorized as extreme values (Pallant, 2011). Further, we checked our dataset for normality, absence of heteroskedasticity, linearity, and multicollinearity. The histograms show that the data are almost normally distributed, with only some moderate deviations. The scatter plots show that there is an absence of heteroskedasticity and that there is a linear relationship (see Appendix C). Lastly, our VIF values show that there is an absence of multicollinearity, since all values are under 10, ranging from -1.000 to 1.597 (Pallant, 2011). In addition, when we computed the correlation matrix (see Table 3), the factors should be distinct, and none of the construct correlations should be greater than 0.8 in order to achieve discriminant validity (Hair et al., 2006). In our case, the magnitude of the correlation coefficients are less than 0.80, despite one case with 0.88, seen in relation to low VIF values, we indicate this as an acceptable level of multicollinearity.

### 3.7.4 Moderation Analysis

To test age and gender as moderators, a moderation mediation analysis was conducted. This test was conducted by using Model 1 in the PROCESS macro for SPSS, as model 1 demonstrates a simple moderation path. The PROCESS macro is developed specifically for simplifying the procedure related to the analysis of different models including mediating and moderating effects (Hayes, 2013). When the goal is to determine whether a variable has an impact on or is related to the size of a variable's effect on another, this analytical method is used. When the strength, size, and sign of an independent variable's effect on the dependent variable Y may be predicted or is reliant on a third variable W, known as the moderator, moderation occurs (Hayes, 2013).

Before multiplying the variables with one another, the interaction term is computed by

centering the variables. To put it differently, the interaction term is created by subtracting the mean of the independent and moderator variables (centering the variables) from each variable and multiplying them together. The aim of centering is to reduce the correlations between the interaction terms and the independent variables so that the independent variables' effect can be distinguished from the interactions. This eliminates the possibility of multicollinearity (Aiken et al., 1991).

A dummy variable is a numerical variable used in regression analysis and is used to distinguish between groups (Saunders et al., 2016). Dummy variables were created in SPSS on gender and age to represent each subgroup of our sample. Gender is categorized in men (0), women (1) and age, older people, aged 36-70 + (0), younger people, aged 18-35 (1).

The results displayed in *chapter 4.3.2* and *4.4.2* show the individual main effects of the independent variable and age/gender perceived on the dependent variable, and the interaction effect of the independent variable and age/gender on the dependent variable. The effects are depicted in statistical diagrams, and we have also plotted the effects in an interaction plot for easier interpretation of the interaction effect. The difference in the slopes indicates an interaction effect (Hayes, 2013).

Since this thesis addresses differences in age and gender, we want to address and explore any age and gender differences between the different relationships on the VAB-model. As addressed earlier in the thesis, research shows that older people compared to younger people are more prone to both fish consumption and pro-ethical behavior, but with younger people being more concerned with environmental issues than older (Mohd Suki, 2013b; Myrland et al., 2000; Panni, 2006; Trondsen et al., 2003). Also, women are found to have a higher intention towards consuming fish than men (Verbeke, 2005). In addition, a link between both age and gender has been discovered in earlier studies, with younger consumers aged 18-25 having a more positive attitude towards green food, and women engaging in becoming green consumers as they are sensitive to environmental issues (Magnusson et al., 2001; Memery et al., 2005; Stern et al., 1993). In relation to social norms, younger people are more likely to comply with social pressure and adopt behaviors in order to fit with a group, and women have a higher level of pro-environmental values, attitudes and behavior due to social expectations

(Trelohan, 2021). Therefore, it is interesting to explore these differences, and look into what effect age and gender might present in the VAB-model.

### 3.9 Evaluation of Research Methodology

To ensure quality, data collection is assessed for validity and reliability. In this study, we have collected primary data and the importance of evaluating the method is crucial to ensure quality. The internal validity and reliability of the response rate and the data collected depend to a large extent on the design and layout of the questions, the structure of the survey, as well as how strict and accurate the pilot testing is. Validity deals with the extent to which we can draw valid conclusions based on the results of the study. The reliability of a survey is about whether the study is reliable, verifiable and replicable (Saunders et al., 2016).

#### 3.9.1 Internal validity

Internal validity is often also referred to as measurement validity as it refers to concerns about whether the result of the survey actually represents the reality of what is being measured. To investigate whether the findings from the survey actually represent the reality of what we wanted to look at, we studied the internal validity of the content and concepts. What is defined as adequate answers can be investigated in several ways (Saunders et al., 2016). One way to assess this and at the same time strengthen the content validity is by conducting a pretest. In the pretest, the survey was sent out to 9 people to ensure accurate wording and appropriate order of the questions. To further strengthen the content validity, the questions were formulated from well-established measurements on the basis of relevant and existing literature.

Concept validity refers to whether there is agreement between our concepts and the theoretical definitions of the phenomena we wanted to measure (Saunders et al., 2016). In our study, the validity of the concept can be linked to whether the statements contribute to measuring the connection between value, attitude and behavior. To ensure valid concept validity, we have used existing and established scales to measure the various variables in the report. The preparation of questions and statements was based on established theories and literature, and

we could therefore use statements that had already been validated. For the questions regarding influencers, the term was specified through further explanations in the question text. This strengthens the concept validity, in addition to creating a more common understanding of the term for all, independently of age. However, since our questionnaire was in norwegian, the statements have been translated to norwegian from english. To ensure the concept validity, these were carefully translated.

### 3.9.2 External validity

External validity refers to the extent to which the findings from the study can be generalized to other relevant situations, groups or contexts (Saunders et al., 2016).

Most ideally, we would have to send out the survey to the entire population of Norway, to ensure that the composition of our sample was representative (Johannessen et al., 2016). As we have only gathered a small selection of the population, it is difficult to claim that the findings can be generalized to the whole population. The sample size is considered large for a research study (N=452), and the respondents county in Norway is widely spread, which strengthens the external validity. However, the external validity is somewhat weakened by the fact that the sample size consists of approximately 70 percent women and 30 percent men. As this study intends to examine Norwegian generation Z and millennials, ranging from 18-35 years old, and the study uses the well-established VAB-model, it is nevertheless conceivable that the findings can be generalized to other situations and contexts among scandinavians youths sharing the same demographics and values.

### 3.9.3 Reliability

Reliability refers to the reliability of the data material, and refers to whether the data collection, processing and analysis give consistent findings. The research project is considered reliable if it is possible to replicate the study with the same measurements and get the same result. Reliability in surveys deals with how robust the survey is, and whether it will provide consistent measurements over time and under different conditions, such as at different samples (Saunders et al., 2016).



Our primary data was collected using an online survey, which is considered as an advantage, as it contributes to sufficient control over the entire process, from preparation of the survey to data collection and implementation of analysis. Threats to reliability may be errors with respondents or researchers. However, as the analysis is based on a questionnaire with a likert-scale, researchers' errors will probably not threaten the reliability of our study (Saunders et al., 2016). Errors by the respondent concern, such as the time when the respondent completed the survey may have affected the result. The survey was published on private social platforms, which gave the respondents the freedom to choose the time of participation themselves. It is therefore natural to assume that there were no special circumstances beyond a normal everyday life that affected the respondents.

Another threat to reliability may be that respondents respond to please the sender, rather than being honest, especially since the survey also was published on private platforms. To ensure that this did not happen, we guaranteed full anonymity in the report, so that no information could be traced back to the individual response. Based on this, we consider the reliability as satisfactory, and that the study would have measured the same if it had been repeated (Saunders et al., 2016).

## 4.0 Results

In this chapter, we firstly present the results from the correlation matrix. Further, the VAB-model with following beta values is presented, along with the result from the regression analysis on our hypothesis. In addition, the VAB-model with the following beta values on Social Norm is presented, along with the result from the regression analysis on our hypothesis regarding Social Norm.

Several moderation analyses have been done to explore age and gender as moderators on the VAB-Model and Social Norm, where only the main findings will be commented on. Lastly, we will provide an overview of whether the hypothesis finds support or not.

## 4.1 Correlation Analysis

Table 3 shows the correlation matrix, and we have in the table and further in the text marked the significance levels with stars (\*). Three stars (\*\*\*) means significant at a 0.01 level, two stars (\*\*\*) correspond to a 0.05 level, and one star (\*) means significant at a 0.1 level.

Table 3: Correlation Matrix

Correlations	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. EC General														
2. EC Fish	.13**													
3. EC Fish farming	.23**	-.17**												
4. Attitude Fish	.03	.67**	-.13**											
5. Intention Fish consumpt.	.02	.63**	-.14**	.88**										
6. Attitude Green Food	.56**	.31**	.15**	.24**	.21**									
7. SN Friends Environment	.51**	.22**	.22**	.11*	.10*	.48**								
8. SN Influencer Environment	.24**	.00	.05	-.11*	-.10*	.19**	.43**							
9. SN Friends Green Food	.31**	.22**	.05	.14**	.14**	.32**	.45**	.22**						
10. SN Influencer Green Food	.13**	.13**	-.07	.11*	.13**	.14**	.18**	.32**	.25**					
11. SN Friends Fish	.12**	.26**	.01	.28**	.29**	.22**	.31**	.11*	.52**	.30**				
12. SN Influencer Fish	.16**	.18**	-.04	.16**	.20**	.14**	.20**	.22**	.26**	.68**	.36**			
13. SN Friends int. Fish cons.	.17**	.26**	.04	.23**	.28**	.18**	.34**	.12*	.53**	.30**	.66**	.35**		
14. SN Influencer int. Fish cons.	.08	.21**	-.037	.15**	.20**	.12*	.26**	.36**	.34**	.42**	.34**	.54**	.55**	

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

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

**EC General** Correlates positively with EC Fish Farming(.23\*\*), indicating that the more environmentally conscious you are, the more negative you will also be to the statements regarding fish farming. In other words, an environmentally conscious person will agree to e.g. “Oppdrettsnæringen forurenses havet” (“The fish farming industry pollutes the sea”).

**EC Fish** correlates positively with Attitude Fish (.67\*\*), Attitude Green Food (.31\*\*) and Intention fish consumption(.63\*\*). People who consider fish as a sustainable resource of protein have a positive attitude towards fish and accordingly have a higher probability of consuming fish. Also people who consider fish as a sustainable resource, also have a positive attitude towards green food.

**EC fish farming** correlates negatively with attitude towards fish(-.13\*\*) and intention towards fish consumption(-.14\*\*). Since our questions are negatively loaded, a higher score

indicates a negative belief about the fish farming industry. Moreover, it correlates positively with SN friends Environment. In other words, the more your friends' advice, expectations and encouragements towards being more environmentally conscious have an impact on you, the more likely your beliefs about fish farming as a sustainable harvesting method will be negative.

**Attitude Fish** is strongly correlated with intention towards fish consumption (.88\*\*). The strong correlation between attitude and intention towards fish was expected as they came out as one factor in our exploratory factor analysis, and later separated it as two distinct factors. Moreover, there is a slightly positive correlation between attitude green food and attitude fish (.24\*) which might indicate that people who are positive to green food also have a positive attitude towards fish.

**Attitude Green food** correlates positively with intention towards fish consumption (.21\*\*), however it is significantly lower than Attitude towards Fish, as expected. Moreover, both attitudes have a positive impact on intention towards fish consumption, showing that our theoretical framework works for its purpose where attitude is an important component for explaining behavior (Ajzen, 1991; Fishbein & Ajzen, 1975).

Regarding **social norm**, there is an overall trend where social norm correlates with EC General and EC Fish, and that friends are more positively correlated than influencers on environmental consciousness, attitude towards green food, attitude towards fish and intention towards fish consumption. However, social norms do not correlate with EC Fish Farming. Also social norms seem to have a bigger impact on Environmental Consciousness and Green Food than Attitude Fish and Intention Towards Fish Consumption.

Moreover, SN Influencer Fish, is strongly correlated with SN Influencer Green Food (.68\*\*) which indicates that, if one is being influenced by an influencer to eat green food, there is a higher potential of being influenced to eat fish as well. The same case is for SN Friends Green Food and SN Friends Fish (.52\*\*). Looking at SN Influencer Environment, the correlation matrix reveals that both Attitude Fish and Intention fish consumption are negatively correlated (-.11\* and -.10\*), indicating that influencers' advice, expectations and

encouragement about being environmentally conscious have a slightly negative impact on individuals' attitude towards fish and intention towards fish consumption.

### 4.2 VAB-framework with Results ( $\beta$ )

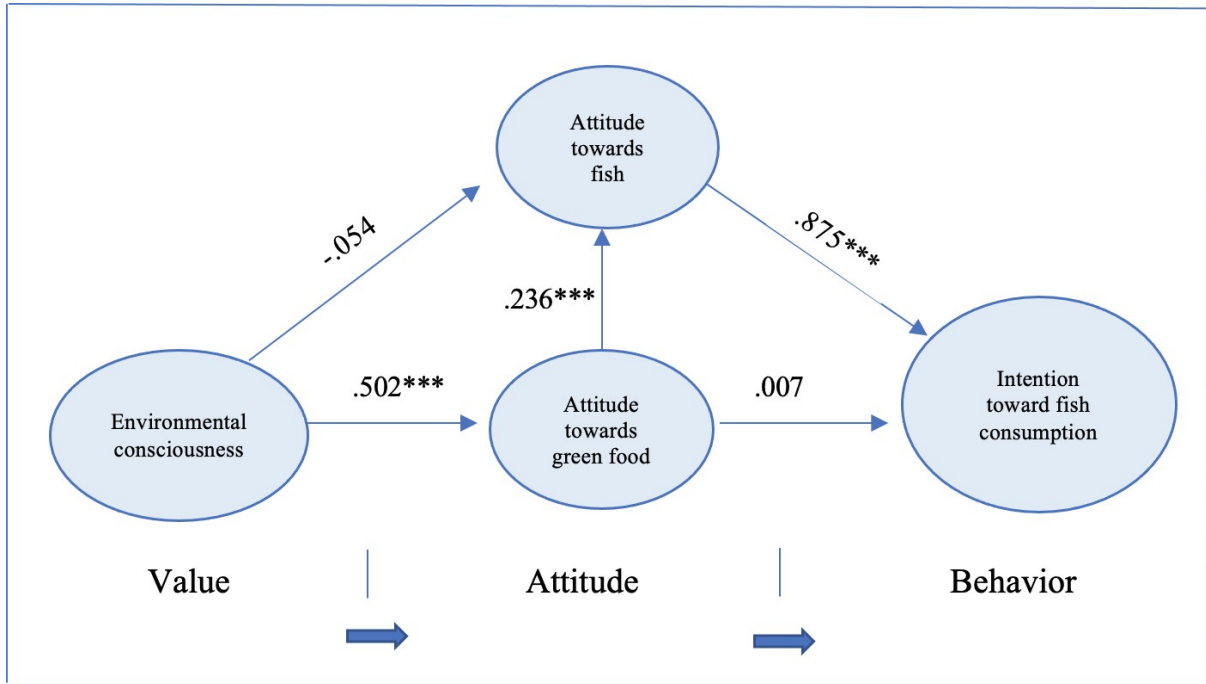


Figure 3: Framework with Results, Extended VAB-model ( $\beta$ )

### 4.3 Hypothesis testing

A multiple regression analysis was performed to examine which hypotheses are supported. First, we tested the VAB-model to see if the three variables for environmental consciousness have a positive effect on attitude towards fish and attitude towards green food. Next step was to check if attitude towards green food has an impact on attitude towards fish, and further, if both attitudes have a positive effect on the intention towards fish consumption. Further, we included social norms to all the different components in the VAB-model to see if it has any effect. In relation to the VAB-model, we looked at age and gender as moderators to see if there is any difference between gender and individuals under 35 compared with those over 35.

The results from the regression analysis can be seen in Table 4 and Table 9. The tables show the variables' standardized beta coefficient, R, and R<sup>2</sup>. Significance levels are marked with stars (\*). Three stars (\*\*\*) means significant at a 0.01 level, two stars (\*\*) correspond to a 0.05 level, and one star (\*) means significant at a 0.1 level. R is the correlation between the predicted values and the observed values of Y. R square indicates the percentage of variation explained by the dependent variable that is explained by the independent variables (Johannessen, 2009). The results from the moderation analysis can be seen in table 5 - 8, and 10 - 15. Simple slopes can be seen in figure 4 - 7, and 9 - 13.

### 4.3.1 Hypothesis Testing of VAB-model

In order to consider the influence of the different independent variables on the dependent variables, we did several regression analyses to examine which variables explained the most for the dependent variable. For environmental consciousness, EC General is the factor which represents whether an individual is environmentally conscious or not, and will therefore represent the environmental consciousness aspect. Further, EC General will determine whether the hypotheses regarding environmental consciousness are supported or not. However, EC Fish and EC Fish farming are included in the regression analysis, as it gives a picture of how people perceive fish as a sustainable resource, and will further be used in the discussion. Similarly, when looking at attitudes towards fish, green food and intention towards fish consumption, we conducted several regression analyses to see if there was any significant difference, see table 4 and Appendix G.

Table 4: Regression VAB-model

ENVIRONMENTAL C.		R	R <sup>2</sup>	$\beta$
Dependent	Independent			
Attitude Fish	EC General EC Fish EC Fish farming	.674	.454	EC Fish: .678*** EC General: -.054 EC Fish Farming: -.003
Attitude Fish	Attitude Green Food	.236	.056	Attitude Green Food: .236***
Attitude Green Food	EC General EC Fish EC Fish farming	.611	.374	EC Fish: .261*** EC General: .502*** EC Fish Farming: .074
INTENTION FISH CONS.		R	R <sup>2</sup>	$\beta$
Dependent	Independent			
Intention Fish Consumption	Attitude Fish	.877	.769	Attitude Fish: .877***
Intention Fish Consumption	Attitude Green Food	.214	.046	Attitude Green Food: .214***
Intention Fish Consumption	Attitude Fish Attitude Green Food	.877	.769	Attitude Fish: .875*** Attitude Green Food: .007

### Environmental consciousness

#### *H1: Environmental consciousness influences attitude towards fish positively*

Firstly, we conduct one regression consisting of all factors of environmental consciousness as independent variables. The regression revealed that EC Fish was significant with beta value ( $\beta=.678***$ ) at 0.01 level. Thus, we tested EC Fish as the only independent variable with Attitude Fish ( $\beta=.672***$ ). EC Fish, accounted for 45 percent of the explained variance in the dependent variable, Attitude Fish. However, EC General, which determines whether an individual perceives themselves as environmentally conscious, does not have any effect on people's attitudes towards fish.

Hence, H1 is not supported.

#### *H2: Environmental consciousness influences attitude towards green food positively*

When testing the different factors for Environmental Conscious separately with the dependent variable Attitude Green Food, EC General is significant at a 0.01 level ( $\beta= .556***$ ).

Moreover, EC Fish ( $\beta= .313***$ ) and EC Fish Farming ( $\beta= .149**$ ) are significant at 0.01 level and 0.05 level. However, when we conducted a regression including all environmental

consciousness factors, EC Fish farming was not significant, but EC General ( $\beta = .502^{***}$ ) and EC Fish ( $\beta = .261^{***}$ ) was significant.

Hence, H2 is supported.

### **Attitudes towards fish**

*H3: A positive attitude towards fish has a positive effect on intention towards fish consumption.*

Attitude towards fish and intention towards fish consumption have a beta value of  $\beta = .877^{***}$  and are significant at 0.01 level. Moreover, attitude towards fish accounts for 77 percent of the explained variance in the intention towards fish consumption.

Hence, H3 is supported.

### **Attitude towards green food**

*H4: A positive attitude towards green food has a positive effect on intention towards fish consumption.*

Attitude towards green food as the only independent value, has a beta value of  $\beta = .214^{***}$  and are significant at 0.01 level. Even if the attitude towards green food only accounts for 4,6 percent of the explained variance in the intention towards fish consumption, it still has a positive effect on the intention towards fish consumption. However, when we tested attitude towards green food along with attitude towards fish as independent values, attitude towards green food has no effect on intention towards fish consumption.

Hence, H4 is not supported.

*H5: A positive attitude towards green food has a positive effect on the attitude towards fish.*

Attitude towards green food has a significant effect on the attitude towards fish, with beta value of  $\beta = .236^{***}$  at a 0.01 level.

Hence, H5 is supported.

### 4.3.2 Moderating Effect of age and gender on VAB-Model

When investigating the moderating effect of age and gender on the VAB-model, we chose to conduct a regression using the PROCESS macro by Hayes to explore whether age and gender have a significant effect (Hayes, 2013). The results of the main findings are presented in tables and visually using plots to see how social norms, with age and gender as moderators, affect the different relationships. Only the most significant interactions are presented. Further, a summary is presented of the main findings.

The significant interaction variables related to age in the VAB-Model was the relationship between Attitude towards Fish and Environmental Consciousness, and the relationship between Intention towards fish consumption and Attitude towards Fish.

#### *Moderating effect of age*

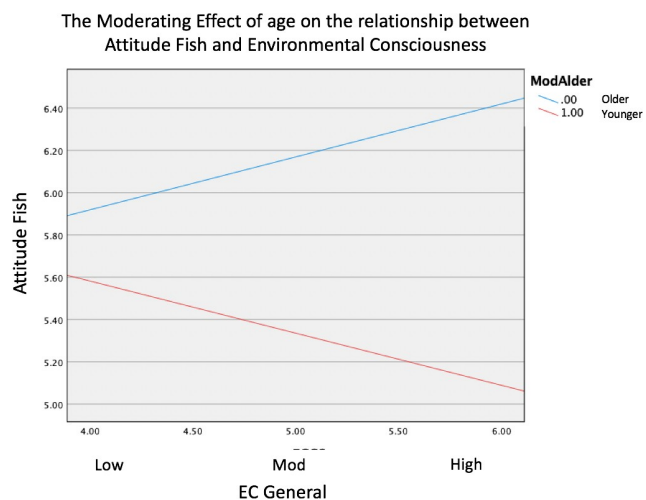
Table 5: Moderation Results

Attitude Fish			
Predictor	Effect	SE	95 % CI
EC General	.25**	.08	.08 - .41
Age	-.87***	.12	-1.11 - -.62
Interaction term	-.50***	.11	-.72 - -.26
Total R <sup>2</sup>	.13***		
Simple slopes			
Younger	-.25**	.08	-.40 - -.08
Older	.25**	.08	.08 - .41
n	446		

\*p<.05, \*\*p<.01, \*\*\*p<.001

Effect: unstandardized regression coefficients for all independent variables

Figure 4: Simple Slopes



In the interaction analyses, the variance explained by the model was 13 percent, ( $F(3,422) = 22.58, p<.001$ ). The interaction between age and Environmental Consciousness (EC General) added significantly to the changes in Attitude Towards Fish (effect =  $-.50***, p = .000$ ). Simple slope analysis revealed a significant slope for younger (effect =  $-.25**, p = 002$ ), and for older (effect =  $.25**, p = 003$ ). As depicted in Figure 4, for older people, the more environmentally conscious they are, the more positive attitude they have toward fish.



Contrary, with younger people, the more environmentally conscious you are, the less positive attitude they have toward fish.

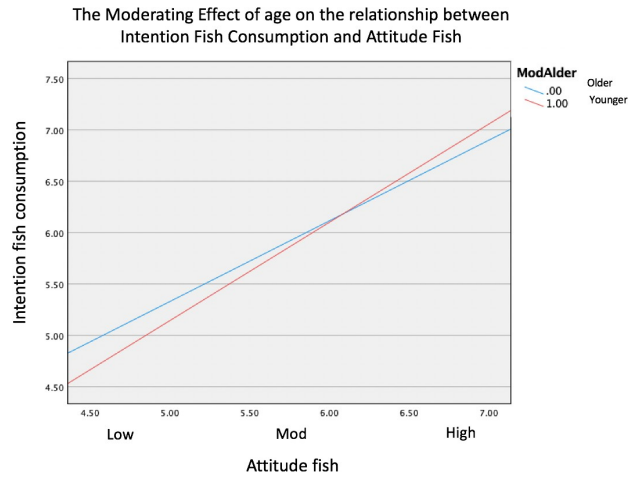
Table 6: Moderation Results

Predictor	Intention fish consumption		
	Effect	SE	95 % CI
Attitude fish	.78***	.04	.70 - .87
Age	-.05	.06	-1.90 - .08
Interaction term	-.17**	.05	.06 - .27
Total R <sup>2</sup>	.77***		
Simple slopes			
Younger	.95***	.02	.89 - 1.01
Older	.78***	.04	.70 - .87
n	446		

\*p<.05, \*\*p<.01, \*\*\*p<.001

Effect: unstandardized regression coefficients for all independent variables

Figure 5: Simple Slopes



In the interaction analyses, the variance explained by the model was 77 percent, ( $F(3,422) = 505.67, p < .001$ ). The interaction between age and Attitude Fish added significantly to the changes in Intention towards fish consumption (effect =  $-.17^{**}, p = .001$ ). Simple slope analysis revealed a significant slope for younger (effect =  $.95^{***}, p = 000$ ), and for older (effect =  $.78^{***}, p = 000$ ). As depicted in Figure 5, there is no difference between younger and older people, they both have a positive significant effect on the relationship between the attitude of the fish and the intention towards the fish.

Summary

Overall, there is a significant difference between younger and older’s Attitude towards Fish and Environmental Consciousness. The more environmentally conscious younger people are, their attitude towards fish becomes worse. However, there is no big difference between younger and older’s Attitude towards Fish and Intention towards fish consumption. The better the attitude they have towards fish, the higher their intention towards fish consumption becomes.

*Moderating effect of gender*

The significant interaction variables related to age in the VAB-Model was the relationship between Attitude towards Green Food and Intention towards fish consumption, and the relationship between Intention towards fish consumption and Attitude towards Fish.

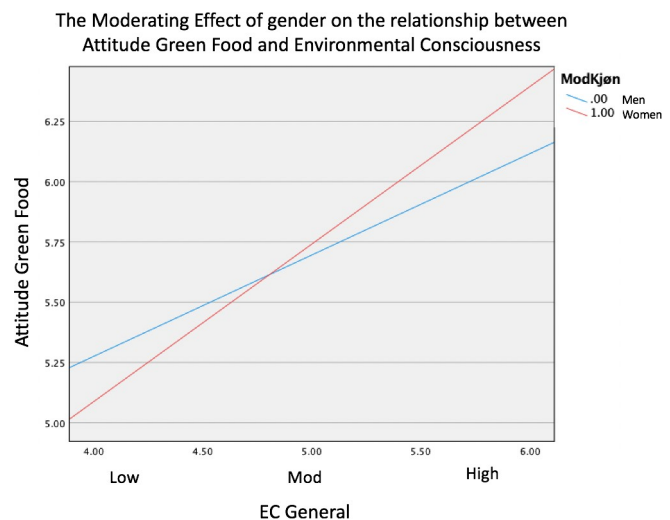
Table 7: Moderation Analysis

Attitude green food			
Predictor	Effect	SE	95 % CI
EC General	.42***	.06	.28 - .55
Gender	.06	.09	-.12- .25
Interaction term	.23**	.08	.06 - .39
Total R <sup>2</sup> .32***			
Simple slopes			
Women	.65***	.05	.89 - 1.01
Men	.42***	.06	.70 - .87
n	445		

\*p<.05, \*\*p<.01, \*\*\*p<.001

Effect: unstandardized regression coefficients for all independent variables

Figure 6: Simple Slopes



In the interaction analyses, the variance explained by the model was 32 percent, ( $F(3,441) = 69.57, p < .001$ ). The interaction between gender and Environmental Consciousness (EC General) added significantly to the changes in Attitude Towards Green Food (effect = .23\*\*,  $p = .006$ ). Simple slope analysis revealed a significant slope for women (effect = .65\*\*\*,  $p = .000$ ), and for men (effect = .42\*\*\*,  $p = .000$ ). As depicted in Figure 6, for women, the more environmentally conscious they are, the more positive attitude they have towards green food. Moreover, with men, the more environmentally conscious they are, the more positive attitude they have toward fish. However, there is a slightly higher effect for women.

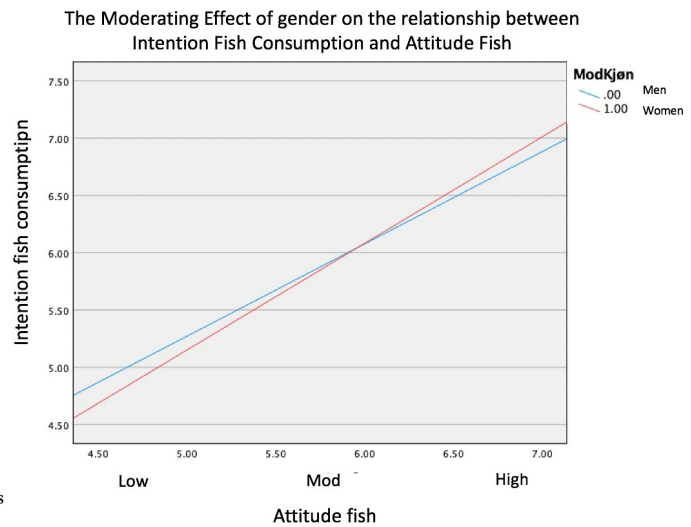
Table 8: Moderation Analysis

Intention fish consumption			
Predictor	Effect	SE	95 % CI
Attitude fish	.80***	.05	.70 - .90
Gender	-.02	.07	-.16- .11
Interaction term	.12*	.05	.01 - .23
Total R <sup>2</sup> .77***			
Simple slopes			
Women	.93***	.02	.87 - .98
Men	.80***	.05	.70 - .90
n	445		

\*p<.05, \*\*p<.01, \*\*\*p<.001

Effect: unstandardized regression coefficients for all independent variables

Figure 7: Simple Slopes



In the interaction analyses, the variance explained by the model was 77 percent, ( $F(3,442) = 496.90, p < .001$ ). The interaction between gender and Attitude Fish added significantly to the changes in Intention Fish Consumption (effect = .12\*,  $p = .030$ ). Simple slope analysis revealed a significant slope for women (effect = .93\*\*\*,  $p = .000$ ), and for men (effect = .80\*\*\*,  $p = .000$ ). As depicted in Figure 7, there is no difference between women and men, they both have a positive significant effect on the relationship between the attitude of the fish and the intention towards the fish.

### Summary

Overall, there is no big difference between women and men's Attitude towards Fish and Intention towards fish consumption. The better the attitude they have towards fish, the higher their intention towards fish consumption becomes. However, women are generally more environmentally conscious, and the difference between women and men becomes more present in their attitude towards green food. When women are more environmentally conscious, they have a better attitude towards green food than men.

### 4.4 VAB- Framework with Results ( $\beta$ ), Social Norm

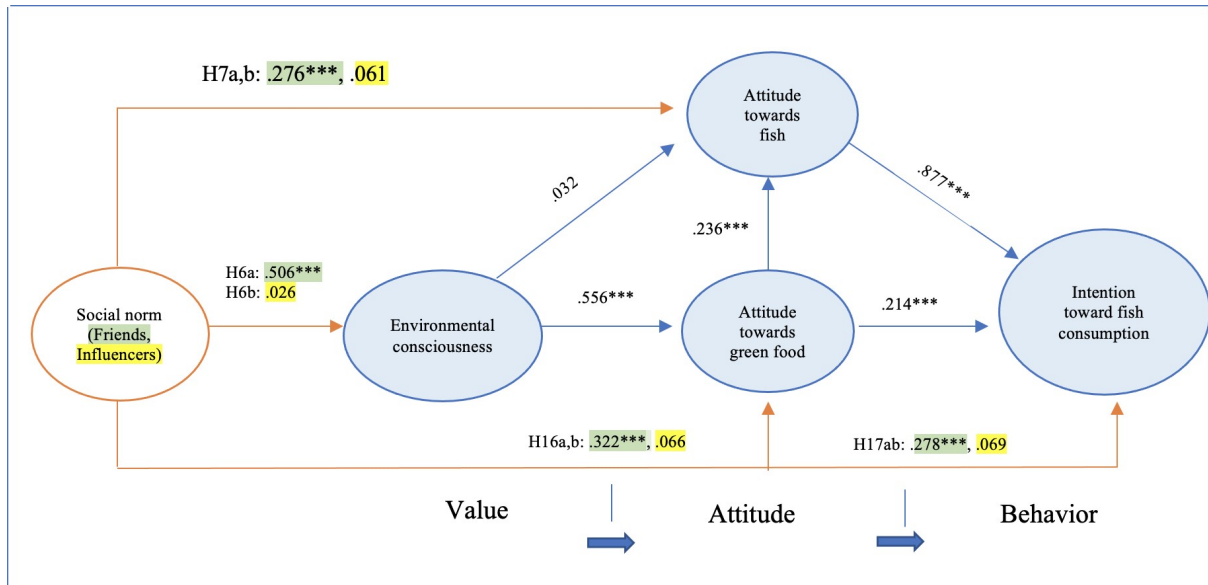


Figure 8: VAB-framework with results ( $\beta$ ), Social Norm

#### 4.4.1 Hypothesis Testing of Social Norm

When investigating the effect of Social Norm, we conducted a multiple regression to explore if social norm has a significant effect, the result can be seen in table 9. This is to test the relationship between social norm and the value, attitudes and behavior as shown in the VAB-model. As mentioned, social norms are divided into friends(a) and influencers(b). Hence, we will firstly comment if there are any significant differences between friends and influencers.

Overall, our analysis shows that friends have a higher effect on influencing individuals' values, attitudes and behavior. Since influencers were not significant in any of the multiple regressions, we explored the relationships further by conducting a linear regression to see if influencers potentially had any influence. Our analysis shows that they have some influence when explored separately. However our hypothesis will be supported only if they are significant when tested in multiple regression

Table 9: Regression Analysis Social Norm

SOCIAL NORM		R	R <sup>2</sup>	β
Dependent	Independent			
EC General	SN Friends Environment	.506	.256	SN Friends Environment: .506***
EC General	SN Influencer Environment	.238	.057	SN Influencer Environment: .238***
EC General	SN Friends Environment SN Influencer Environment	.507	.257	SN Friends Environment: .495*** SN Influencer Environment: .026
Attitude Fish	SN Friends Fish	.276	.076	SN Friends Fish: .276***
Attitude Fish	SN Influencer Fish	.156	.024	SN Influencer Fish: .156***
Attitude Fish	SN Friends Fish SN Influencer Fish	.291	.085	SN Friends Fish: .264*** SN Influencer Fish: .061
Attitude Green Food	SN Friends Green Food	.322	.104	SN Friends Green Food: .322***
Attitude Green Food	SN Influencer Green Food	.143	.020	SN Influencer Green Food: .143***
Attitude Green Food	SN Friends Green Food SN Influencer Green Food	.392	.108	SN Friends Green Food: .306*** SN Influencer Green Food: .066
Intention fish consump.	SN Friends int. Fish cons.	.278	.077	SN Friends int. Fish cons.: .278***
Intention fish consump.	SN Influencer int. Fish cons.	.204	.042	SN Influencer int. Fish cons.: .204***
Intention fish consump.	SN Friends int. Fish cons. SN Influencer int. Fish cons.	.288	.083	SN Friends int. Fish cons.: .244*** SN Influencer int. Fish cons.: .069

**H6a and b:** *Social norms (friends and influencers) have a positive effect on environmental consciousness.*

Both friends ( $\beta = .506^{***}$ ,  $R^2 = .256$ ) and influencers ( $\beta = .238^{***}$ ,  $R^2 = .057$ ) are significant at 0.01 level when tested alone separately. However, when testing SN Friends Environment and SN Influencers Environment as independent variables together with EC General as dependent, one can see that compared to friends ( $\beta = .495^{***}$ ), influencers do not have a significant effect on their advice, expectations and encouragement to be more environmentally conscious ( $\beta = .026$ ). Hence, H6a is supported and H6b is not supported.

**H7a and b:** *Social norms (friends and influencers) have a positive effect on attitude towards fish.*

Both friends ( $\beta = .276^{***}$ ,  $R^2 = .076$ ) and influencers ( $\beta = .156^{***}$ ,  $R^2 = .024$ ) are significant at 0.01 level when tested alone separately. However, when testing SN Friends Fish and SN Influencer Fish as independent variables together with Attitude towards Fish as dependent, one can see that compared to friends ( $\beta = .264^{***}$ ), influencers do not have a

significant effect on their desire, expectations and encouragement to eat fish ( $\beta = .061$ ),. Hence, H7a is supported and H7b is not supported.

**H8a and b:** *Social norms (friends and influencers) have a positive effect on attitude towards green food.*

Both friends ( $\beta = .322^{***}$ ,  $R^2 = .104$ ) and influencers ( $\beta = .143^{**}$ ,  $R^2 = .020$ ) are significant at 0.01 level and 0.05 level when tested alone separately.

However, when testing SN Friends Green Food and SN Influencer Environment as independent variables together with Attitude towards Green Food as dependent, one can see that compared to friends ( $\beta = .306^{***}$ ), influencers do not have a significant effect on their advice, expectations and encouragement to eat more green food ( $\beta = .066$ ). Hence, H8a is supported and H8b is not supported.

**H9a and b:** *Social norms (friends and influencers) have a positive influence on intention towards fish consumption.*

Both friends ( $\beta = .278^{***}$ ,  $R^2 = .077$ ) and influencers ( $\beta = .204^{***}$ ,  $R^2 = .042$ ) are significant at 0.01 level when tested alone separately. However, when testing SN Friends Intention Fish consumption and SN Influencer Intention Fish consumption as independent variables together with Intention Fish consumption as dependent, one can see that compared to friends ( $\beta = .244^{***}$ ), influencers do not have a significant effect on their influence to purchase and eat (consuming) fish ( $\beta = .069$ ). Hence, H9a is supported and H9b is not supported.

#### 4.4.2 Moderating Effect of age and gender on Social Norm

The results of the main findings of the multiple regression, using PROCESS Macro, is presented in tables and visually using plots to see how social norms, with age and gender as moderators, affect the different relationships on the VAB-model. Only the most significant interactions are presented. Further, a summary is presented of the main findings.

*Moderating effect of age*

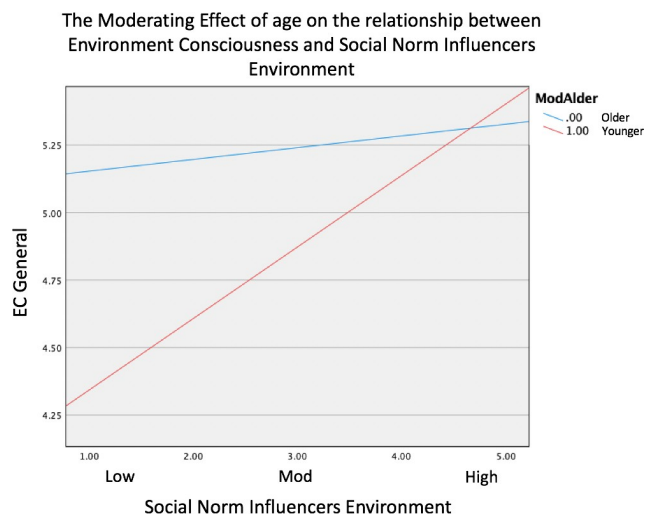
The significant interaction variables related to age and its effect on Social Norm’s relationship to the VAB-Model were Environmental Consciousness and Influencers’ influence on being environmentally conscious, and the relationship between Attitude towards Fish and Friends influence towards eating more fish.

*Table 10: Moderation Results*

Predictor	EC General		
	Effect	SE	95 % CI
SN Influencers Environment	.04	.04	-.04-.13
Age	-.35***	.09	-.55 --.16
Interaction term	.22***	.05	.10-.33
Total R <sup>2</sup>	.11***		
Simple slopes			
Younger	.26***	.03	.19-.33
Older	.04	.04	-.04-.13
n	437		

\*p<.05, \*\*p<.01, \*\*\*p<.001  
Effect: unstandardized regression coefficients for all independent variables

*Figure 9: Simple Slopes*



In the interaction analyses, the variance explained by the model was 11percent, ( $F(3,433) = 18.87, p<.001$ ). The interaction between age and Social Norm Influencers Environment added significantly to the changes in Environmental Consciousness (EC General) (effect = .22\*\*\*,  $p = .0002$ ). Simple slope analysis revealed a significant slope for younger (effect = .26\*\*\*,  $p = .000$ ), but not for older (effect = .04,  $p = .330$ ). As depicted in Figure 9, for younger people, they are more prone to be influenced about being more environmentally conscious from influencers, than older people. The plot indicates that the older people are significantly lower influenced by influencer’s advice, expectations and encouragement about being more environmentally conscious.

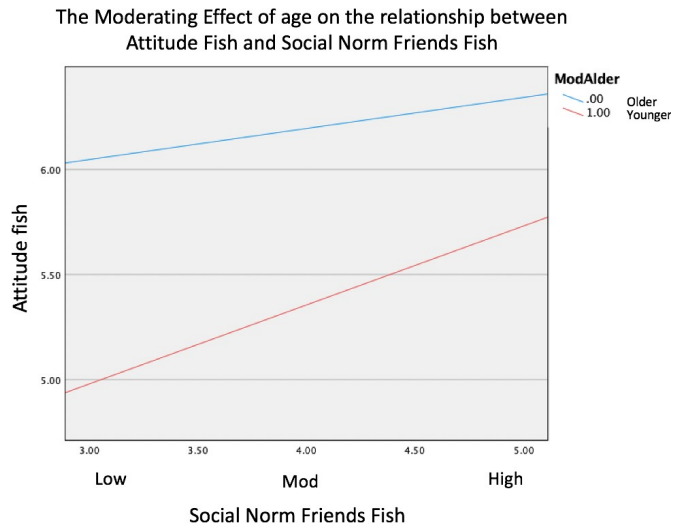
Table 11: Moderation Analysis

Attitude fish			
Predictor	Effect	SE	95 % CI
SN Friends Fish	.15	.07	.00-.28
Age	-.82***	.12	-1.07--.58
Interaction term	.22*	.09	.03-.41
Total R <sup>2</sup>	.17***		
Simple slopes			
Younger	.37***	.06	.24-.50
Older	.14*	.07	.00-.28
n	437		

\*p<.05, \*\*p<.01, \*\*\*p<.001

Effect: unstandardized regression coefficients for all independent variables

Figure 10: Simple Slopes



In the interaction analyses, the variance explained by the model was 17 percent, ( $F(3,427) = 29.57, p < .001$ ). The interaction between age and Social Norm Friends Fish added significantly to the changes in Attitude Fish (effect = .22\*,  $p = .018$ ). Simple slope analysis revealed a significant slope for younger (effect = .37\*\*\*,  $p = .000$ ), and for older (effect = .14\*,  $p = .035$ ). As depicted in Figure 10, For younger people, they are more prone to be influenced by their friends about their attitude towards fish, than older people. The plot indicates that the older people have a more positive attitude towards fish, however, they get slightly influenced by friends as well.

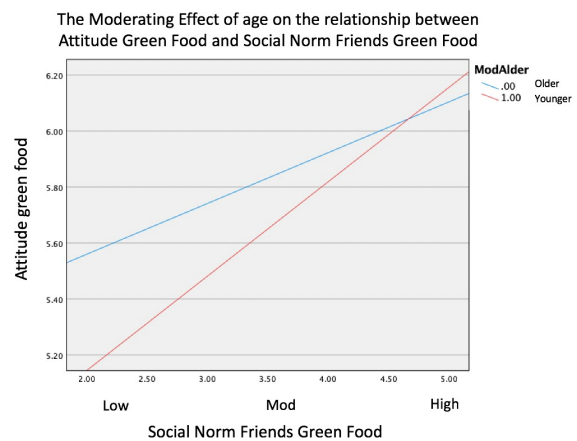
Table 12: Moderation Analysis

Attitude green food			
Predictor	Effect	SE	95 % CI
SN Friends Green food	.18**	.05	.07-.28
Age	-.13	.09	-.33-.05
Interaction term	.15*	.07	.00-.30
Total R <sup>2</sup>	.12***		
Simple slopes			
Younger	.33***	.05	.23-.43
Older	.18***	.05	.07-.28
n	437		

\*p<.05, \*\*p<.01, \*\*\*p<.001

Effect: unstandardized regression coefficients for all independent variables

Figure 11: Simple Slopes





In the interaction analyses, the variance explained by the model was 12 percent, ( $F(3,433) = 19.10, p < .001$ ). The interaction between age and Social Norm Friends Green Food added significantly to the changes in Attitude Green Food (effect =  $.15^*$ ,  $p = .036$ ). Simple slope analysis revealed a significant slope for younger (effect =  $.33^{***}$ ,  $p = .000$ ), and for older (effect =  $.18^{***}$ ,  $p = .0007$ ). As depicted in Figure 11, younger people are more prone to be influenced by their friends about their attitude towards green food, than older people. The plot indicates that both younger and older people have approximately the same attitude towards green food. However, the plot reveals that both younger and older people are being influenced by their friends regarding their attitude towards green food.

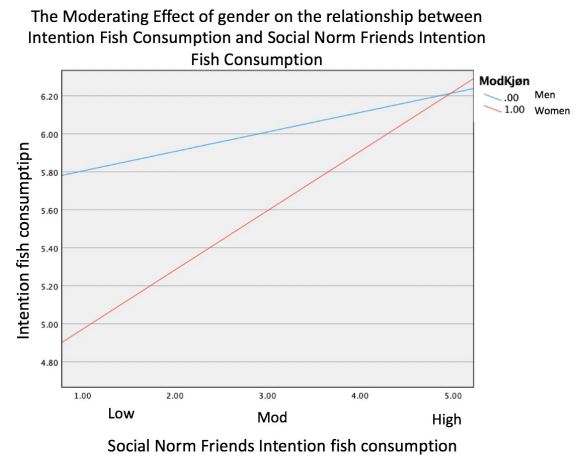
Table 13: Moderation Analysis

Predictor	Intention fish consumption		
	Effect	SE	95 % CI
SN Friends Int. fish cons.	.10	.08	-.06-.27
Gender	-.28	.14	-.57-.005
Interaction term	.20*	.10	.01-.40
Total R <sup>2</sup>	.09***		
Simple slopes			
Women	.31***	.05	.21-.41
Men	.10	.08	-.06-.27
n	415		

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Effect: unstandardized regression coefficients for all independent variables

Figure 12: Simple Slopes



In the interaction analyses, the variance explained by the model was 9 percent, ( $F(3,411) = 25.84, p < .001$ ). The interaction between gender and Social Norm Friends Intention Fish Intention added significantly to the changes in Intention Fish Consumption (effect =  $.20^*$ ,  $p = .038$ ). Simple slope analysis revealed a significant slope for women (effect =  $.31^{***}$ ,  $p = .000$ ), but not for men (effect =  $.10$ ,  $p = .240$ ).

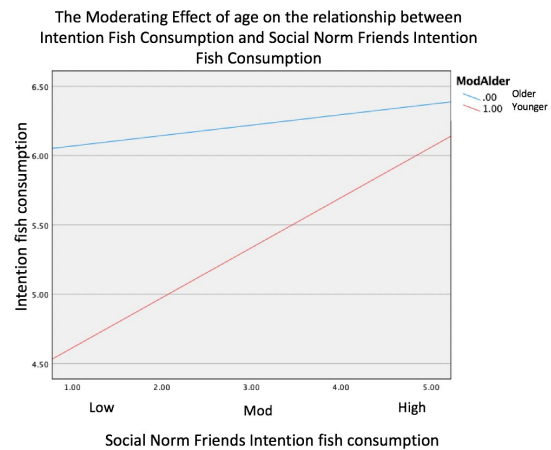
Table 14: Moderation Analysis

Predictor	Intention fish consumption		
	Effect	SE	95 % CI
SN Friends Int. fish cons.	.07	.06	-.04-.19
Age	-.70***	.13	-.96 --.45
Interaction term	.28***	.08	.11-.45
Total R <sup>2</sup>	.15***		
Simple slopes			
Younger	.36***	.05	.24-.47
Older	.07	.06	-.04-.19
n	415		

\*p<.05, \*\*p<.01, \*\*\*p<.001

Effect: unstandardized regression coefficients for all independent variables

Figure 13: Simple Slopes



In the interaction analyses, the variance explained by the model was 15 percent, ( $F(3,411) = 25.84, p < .001$ ). The interaction between age and Social Norm Friends Intention Fish Consumption added significantly to the changes in Intention Fish Consumption (effect =  $.28^{***}, p = .0009$ ). Simple slope analysis revealed a significant slope for younger (effect =  $.36^{***}, p = .000$ ), but not for older (effect =  $.07, p = .226$ ).

As depicted in Figure 12 and Figure 13, for younger people and women, they are more prone to be influenced by their friends regarding the intention towards fish consumption, than older people and men. The plot indicates that the older people and men have a higher intention towards fish consumption, however, they get slightly influenced by friends as well.

Summary

Overall, younger people are more prone to being influenced by both friends and influencers. Older people are also influenced, but seem to be more confident in their attitudes and behaviors. We see that younger people care about what their friends' attitudes are regarding fish and green food. In those relationships where influencers were significant, younger people were significantly more influenced by influencers than older. Moreover, for younger people and women, they are more prone to be influenced by their friends about the intention towards fish consumption, than older people and men.

However, an important factor to point out is that every question relating to social norm, both friends and influencers, have a Mean below 4.0 (see Table 2), which indicates that nor friends

or influencers advice, expectations, encouragements has an influence on a large share of our respondents attitude towards fish, attitude towards green food and intention to consume fish. But, the questions related to friends' influence on being more environmentally conscious has a mean above 5.0. Overall, the variance in the questions related to social norm is large, indicating a big spread in the respondents' answers, which is why the main findings on the moderating effect on age on gender is interesting to investigate. Especially influencers influence on younger people about being more environmentally conscious (var = 3.2).

## 4.5 Summary of Hypothesis Testing

<i>Hypothesis</i>	<i>Variables</i>	<i>Results</i>	
H1	Environmental consciousness influences attitude towards fish positively	Not supported	
H2	Environmental consciousness influences attitude towards green food positively	Supported	
H3	A positive attitude towards fish has a positive effect on intention towards fish consumption	Supported	
H4	A positive attitude towards green food has a positive effect on intention towards fish consumption	Not supported	
H5	A positive attitude towards green food has a positive effect on the attitude towards fish	Supported	

<i>Hypothesis</i>	<i>Variables</i>	<i>Results</i>	
		<i>a (friends)</i>	<i>b (influencers)</i>
H6a and b	Social norms (friends and influencers) have a positive effect on environmental consciousness	Supported	Not supported
H7a and b	Social norms (friends and influencers) have a positive effect on attitude towards fish	Supported	Not supported
H8a and b	Social norms (friends and influencers) have a positive effect on attitude towards green food	Supported	Not supported
H9a and b	Social norms (friends and influencers) have a positive influence on intention towards fish consumption	Supported	Not supported

*Table 16: Summary of Hypothesis Testing*

## 5.0 General Discussion and Conclusion

### 5.1 Discussion of findings

This chapter will discuss key findings from the regression analysis, correlation matrix and moderation analysis. First, the main findings in the VAB-model including the moderating effect of age and gender will be discussed. Further, social norms and the moderating effect of age and gender will be discussed. We will also provide possible explanations for our findings, seen in light of theory.

## VAB-Model

The theory claims that younger people have environmental consciousness as their top personal concerns (Deloitte, 2019), and further that there is an attitude behavior gap among consumers regarding, also called the green gap. Even if our theoretical part argues for younger people to be more environmentally conscious, our study indicates that younger Norwegian consumers do not share the same opinion about environmental consciousness as earlier studies.

Our study has shown that younger people are less environmentally conscious than people above the age of 35, see Appendix D. This result does not align with the presented theory. In order to give an explanation, we explored each question within EC General. As a result, it was found that younger people score higher than older in the question “Jeg er bekymret for planetens fremtid”(“I am worried about the planets future”), but not other questions such as “Ved valg mellom to like produkter, kjøper jeg det som er minst skadelig for miljøet”(“When choosing between two equal products, I purchase the one less harmful to the environment.”), and “Hvis jeg blir oppmerksom på at en bedrift skader miljøet, slutter jeg å kjøpe produktene deres”(“If I become aware that a company is harming the environment, I will stop buying their products”). The first question is rather abstract, while the other questions are more action-based and relatable to real life. Hence, Deloitte's statement about millennials and generation Z having climate/environment as their top concerns could be an explanation for why younger people score higher in a question regarding being concerned about the planet's future. An explanation could be that younger people are more concerned, while older people act upon it. According to research, an explanation could be that the impact of environmental concern on environmental behavior is low to moderate (Bamberg, 2003). It is possible that older people are more aware of their impact on the environment and are more willing to make more sustainable choices in their everyday life (Censuswise Research, 2020).

Moreover, one of the main barriers to action, according to researchers, is psychological distance. The most severe effects of climate change will be seen by future generations, and it can be difficult to understand the long-term implications of our daily actions (Spence et al., 2011). Several factors might contribute to explain this finding, such as knowledge, emotions, income, life experience, availability and habits (Carlucci et al., 2015; Smith et al., 2017;

Verbeke et al., 2007). It is especially hard to change people's habits. Sustainable behaviors often involve repeated actions that require new habit formation. Habit transformation is essential for long-term behavior change since many typical habits are unsustainable (White et al., 2019). Moreover, Norwegian consumers are one of the world's most polluting consumers, making it even harder to change their habits, as it would have required a significant change in their behaviors. It would require 3.4 earths if every individual on the planet consumed as much natural resources as the average Norwegian (Reinvang, 2008).

The theory about women being more environmentally conscious aligned with our results, and the difference between women and men becomes more present in their attitude towards green food, as women with high environmental consciousness have better attitudes towards green food than men. It should be mentioned that the difference is minor, but still significant. Earlier studies have indicated this finding to be a result of women being more sensitive to environmental issues (Memery et al., 2005; Stern et al., 1993). According to (Hunter et al., 2004) and Trelohan (2021), women have higher levels of pro-environmental values and attitudes than men, often due to social expectations. Additionally, Norwegian women buy more eco-labeled goods to a much greater extent, and are more willing to buy local products, than men. Furthermore, vegetarian and ecological food is more popular among Norwegian women than men, and have had a significant increase in the last five years (Ipsos, 2020). Our results also showed that older people have a slightly more positive attitude towards green food. Contrary, Magnusson et al. (2001) found younger consumers, ageing 18-25 years, to have a more positive attitude towards green food and be more likely to buy a green option than older respondents. An explanation of this finding could be based on our previous findings regarding older people being more environmentally conscious than younger.

Furthermore, an interesting finding was that environmentally conscious people correlated strongly with attitude towards green food, but not with attitude towards fish. In other words, people who view themselves as environmentally conscious do not necessarily have a positive attitude towards fish. Perhaps people do not view fish as a sustainable resource as much as the industry would like them to. The moderating effect of age indicates that the more environmentally conscious younger people are, their attitude towards fish becomes worse, see *chapter 4.3.2*. Hence, attitude towards fish is strongly affected by age, where younger people

do not have as good attitudes towards fish as older people, which is also confirmed by the different groups' means within attitude towards fish (Mean younger = 5.3, Mean older = 6.3, see Appendix E). To further explore this, we did a linear regression between the question “Jeg anser fisk som en bærekraftig råvare” (“I consider fish to be a sustainable commodity”) with age and gender. The result was that younger people does not agree with this statement as much as older people (-.294\*\*\*). Also, interestingly, women does not agree with this statement as much as men (-.116\*\*), see Appendix F. When looking at the Mean in question “Jeg anser fisk som en bærekraftig råvare”(“I consider fish to be a sustainable commodity”) the total score for both groups, younger and older, is 5.0, when the top score is 7. Hence, people slightly agree that fish is sustainable, since 4 is neutral.

As expected, intention towards fish consumption is not as high among younger people as with older people, see Appendix Ha. It confirms the report from Norsk Spisefakta which states that the older part of the population is the most eager fish eaters, and that fish consumption increases with household size and age (Ipsos, 2020; Trondsen et al., 2003). Older people's attitude towards fish and intention towards eating fish is most likely a result of e.g. culture, traditions, health concerns and higher income (Banrie, 2012). In addition, many young Norwegian consumers associate fish with obligatory meals from childhood, and therefore prefer meat for dinner. A significant number also say they eat fish "because it is healthy" out of pure duty and not by desire. With meat it is the opposite; people eat meat because they think it tastes good (Norges Sjømatråd, 2018a). Moreover, our study shows a significant but minor difference between men and women in the relationship between attitude towards fish and intention towards consuming fish. Interestingly, men have a slightly more positive attitude towards fish when looking at Mean for the respective groups. These results do not align with previous studies (Verbeke, 2005). However, the difference in our study is minor, indicating that both men and women have similar attitudes and intentions towards consuming fish.

Further, our arguments for why fish is a sustainable resource for protein is based on the fact that fish has a lower carbon footprint, on average, than other animal proteins like e.g. red meat (Nijdam et al., 2012). Additionally fish is classified by the Norwegian Health organization to be both healthy and sustainable, and studies have shown that a diet rich in red meat can result

in over 15 pounds of carbon emissions per day, compared to just 8 pounds from pescetarian and vegetarian diets (Scarborough et al., 2014). However, the fishing industry has some red lights regarding sustainability such as overfishing and damaging the aquaculture. As mentioned earlier, during the time our questionnaire was active, a controversial documentary, *Seaspiracy*, was published on Netflix and became the most seen show on Netflix in Norway and several other countries (Myhre, 2021). "Seaspiracy" addresses plastic littering, overfishing and slavery at sea, which is important topics regarding the seafood industry and sustainability. Nature documentaries have been shown to influence environmental consciousness, boost the number of online requests and media discussions according to research (Nolan, 2010). The possibility of concern translating into actual behavior change, on the other hand, is poorly understood (Jones et al., 2019). However, it could potentially have influenced some of our respondents' attitudes towards fish, and especially younger people that are less critical to the information they received in the documentary. Finding credible information is a complex and demanding task for any information consumer, and especially for young people, given the vast array of information sources available today. Due to their relative lack of development and life experience compared to adults, young people lack the tools and abilities necessary to appropriately evaluate information (Flanagin & Metzger, 2008).

From the correlation matrix we saw that EC Fish Farming correlated negatively with EC General. As expected, people who are environmentally conscious agree that fish farming has a negative impact on aquaculture, pollutes the ocean and that the industry throws away too much of their fish. Hence, our findings align with the report from Norges Sjømatråd (2020), showing that only 35 per cent in their survey with 1026 norwegian respondents believe that the salmon industry acts in an open and honest way. Almost half (47 per cent) also believe that the industry does not take active environmental responsibility. However, some actors within the fish farming industry are pointing towards the fact that the level of knowledge about the salmon industry is generally low.

Looking into the relationship between attitude towards green food and attitude towards fish, both the correlation matrix and regression analysis revealed a significant relationship. Hence, those who are positive towards green food might also be positive towards fish, such as proposed in chapter 2.3.2 *Attitude towards Green Food*. The interest for living a greener

lifestyle includes both those who are vegetarian and pescetarian, but also those who are trying to reduce their carbon footprint by e.g. implementing meat free days. An explanation to this could be that those who have a positive attitude towards green food, are found to be environmentally conscious, thus being more aware of the carbon footprint red meat has. Hence, viewing fish as a more environmentally friendly option (Smith et al., 2017).

## **Social Norm**

Social norms have shown to have an influence on people's values, attitudes and behavior. The presence, behaviour, and expectations of others have a significant impact on consumers. One of the most influential factors in affecting sustainable consumer behavior change is social influences, such as social norms (White et al., 2019). Overall, considering social norms, friends have a greater impact compared to influencers, and especially towards being environmentally conscious. Consumer behaviors have shown to be influenced by others' opinions and expectations, and what consumers feel is socially appropriate (Cialdini et al., 2006; Hoyer et al., 2020; Peattie, 2010). According to Cialdini et al. (2006), people often underestimate the degree to which they get influenced by other people when it comes to environmental consciousness. Friends are also considered as an important group for social norms, as friends' opinions, expectations and fear of becoming an outsider are critical factors for explaining the impact of social norms among friends (Page et al., 2006). Moreover, people believe that a recommendation on social media from someone they know personally will improve the perception of a brand, compared to 15 percent if it is an influencer (Deloitte, 2020), which could explain why friends have a higher influence than influencers.

When looking further into age and gender as moderators, the findings revealed some interesting points for discussion.

Social norms have a higher influence on younger people than older regarding environmental consciousness. Moreover, the results indicate that younger people are being influenced by *influencers'* advice, expectations and encouragement about being more environmentally conscious. For Norwegian millennials and generation Z's, protecting the environment or climate change has been reported as the top issue for personal concerns (Deloitte, 2019), which can be explained by the fact that social pressure can arise not only from family and



friends, but also from social trends (Hoyer et al., 2020). In comparison to older people, younger generations are more prone to feel ashamed about living unhealthy and environmentally unfriendly lifestyles, reveals a report from GlobeScan (Hassim, 2021). Further, young Norwegians are according to Ipsos SOME-tracker (2020) active users of Snapchat, Instagram, Youtube and TikTok, which gives clarity to why influencers affect younger people regarding environmental consciousness, as influencers often operate on these platforms. Conversely, people above the age of 35 spend more time on Facebook than younger people (Deloitte, 2020). Also, 40 percent of the respondents in Deloitte's report states that they visit influencer-accounts on either Instagram, Youtube or Snapchat. Again, it is Generation Z who accounts for most of the representation (Deloitte, 2020).

People in the age ranging from 16-35 are the most active social media users in Norway (Statista, 2020). According to a report from Statista (2019), norwegian people have listed "Entertainment" (59 percent), and "Follow Brands/Companies" (30 percent) as their purpose of instagram usage. Further, average time spent on social media among millennials and generation Z are 3,1 hours per day, compared to 1,9 for people aging from 37-71 (Statista, 2019). These numbers along with social pressure from social trends can potentially be a part of the explanation to why young consumers aged under 35 years old are more influenced by influencers about being environmentally conscious.

Furthermore, regarding attitude towards fish, younger people are more prone to be influenced by their friends about their attitude towards fish, than older people. The results also show that older people generally have a more positive attitude towards fish, and get slightly influenced by friends as well. This might indicate that older people are more secure in their behaviors, and probably have established families and routines which makes it harder to impact their habits (Ersche et al., 2017; White et al., 2019). Regarding friends' influence on attitude towards green food, younger people are more prone to be influenced by their friends than older people. Moreover, both younger and older people have approximately the same attitude towards green food. However, when comparing the influence from friends about their attitude towards green food, we see that both younger and older people are more influenced by their friends about their attitude towards green food than their attitude towards fish. An explanation to this could be that green food and sustainability has become trendy in today's society, and in

recent years many companies have focused more on being sustainable and taking action (Mohd Suki, 2016). As a result, more green food has become available in Norway. According to research, customers view organic food as fashionable, and emphasize the social value of organic products used to express social identity, class, or status (Azzurra et al., 2019).

## 5.2 Conclusion

The purpose of this study was to examine our extended VAB-model by investigating how environmental consciousness influences individuals' attitude toward fish and attitude towards green food, and further how these attitudes affect their intention to fish consumption. Social norms were added to the model as a direct driver for value, attitudes and behavior. Due to Lerøys initiative about examining this topic in light of young consumers, both age and gender was investigated as moderators, to seek solutions to increase the consumption of fish among younger people.

The results from an online survey with 452 respondents shows that environmental consciousness influences attitude towards green food positively, and a positive attitude towards fish has a positive effect on intention towards fish consumption. Further, a positive attitude towards green food has a positive effect on the attitude towards fish. Moreover, our study has shown that younger people are less environmentally conscious than people above the age of 35. The difference between women and men becomes more present in their attitude towards green food, as women with high environmental consciousness have better attitudes towards green food than men.

However, our study revealed that environmental consciousness *did not* have any effect on the attitude towards fish, and a positive attitude towards green food does *not* have any effect on intention towards fish consumption. Our findings indicate that younger people today have a slightly positive attitude towards fish. However, the more environmentally conscious they are, the worse their attitude towards fish is. Younger people are more *concerned* about the environment, however, there is a gap between their level of concern and action. In addition, social norms seem to have a slight impact on younger people today, and influencer's advice, expectations and encouragement is shown to influence younger people regarding being more

environmentally conscious. Social norms from friends were also shown to influence younger people to a greater extent than older people regarding their attitude towards green food and fish, and intention towards fish consumption.

Results from this study contribute to the research field of fish consumption behavior as this study gives valuable insights on how environmental consciousness, attitude towards fish and green food, including differences in age and gender, explains the intention towards fish consumption. Findings of this study may be of interest to consumer researchers, brand manager, marketing manager, or other strategic decision-makers in a company in the fish industry to understand the explanation predictors (value and attitude) of a specific behavior, intention towards fish consumption, and additionally to understand how young consumers values and attitudes influence their consumption behavior. Ultimately, if we do not understand consumers, we can not effectively influence their attitudes and behaviors.

## 5.3 Implications

Following the theoretical and managerial implications will be presented. The following subsections will clarify the relevance of this work for both academic researchers and managers.

### 5.3.1 Theoretical Implications

Several theoretical implications can be drawn from the findings of this research project. When developing our research model included several integrated models derived from different combinations of VAB, and Social Norm related to sustainable consumer behavior, adoption of green products and attitude towards fish.

The findings of the present study contribute to the research field of sustainable consumption, whereas environmental consciousness is a driver towards attitude towards fish and green food, and lastly the different attitudes as drivers for intention towards fish consumption. Even though academics have done research within the fields of sustainable consumption, green food etc. for several years, little research exists on whether consumers perceive fish as a sustainable resource and if consumers emphasise the aspect of sustainability when intending

to buy or eat fish. Thus, this research aimed at exploring the potential relationship between environmental consciousness and fish consumption. Additional variables, in general, tend to make the model's parsimonious values worse. In our situation, the contrary was discovered in the VAB-model, which aided in the validation of our proposed research model. We chose “attitude towards fish”, however most studies have used “attitude towards eating fish”. Moreover, in social norms when exploring influencers influence rather than e.g. family’s influence, which is well documented as an important social norm, the validation of our research model was weakened. Furthermore, our study supports Culiberg’s study (2015) which shows that younger people more easily adopt behaviors in order to fit in with a group, thus making them more prone to being influenced to others opinions.

Our research revealed that there is no significant relationship between being environmentally conscious and having a positive attitude towards fish. With this finding, we contribute to the study by Verbeke (2007) who found that perceived importance toward sustainability has no correlation with fish consumption frequency and attitude toward eating fish. We further add to the research about environmental consciousness among younger Norwegians, as our study revealed that younger Norwegian consumers, in fact, do not perceive themselves as more environmentally conscious than older people. In other words, our findings do not comply with former research within this field ((Deloitte, 2019; Gangsø, 2021; Glocalities, 2019; Jansson et al., 2010; Petro, 2020; Reinhart, 2018; Reints, 2019)). Our study aimed at exploring the potential attitude behavior gap, however when younger people are less environmentally conscious than older, and do not fully view fish as a sustainable resource, there does not exist an attitude-behavior gap.

This study verifies that values, attitude and social norm has a significant linkage towards intention, supporting the propositions of VAB as well as previous green studies’ findings regarding the positive impacts of attitude and social norm on consumers’ behavior (Cheung & To, 2019; Jacobs et al., 2018; Kang et al., 2015; McCarty & Shrum, 1994). Further it demonstrates the importance of separating younger and older, and gender when it comes to attitude towards green food, fish and social norms (Deloitte, 2019, 2020; Hassim, 2021; Trondsen et al., 2003). The results suggest that there is a clear difference between younger and older in the relationship between being environmentally conscious and having a positive attitude towards fish, whereas the more environmentally conscious younger people are, their

attitude towards fish gets worse. Contrary, the opposite accounts for the older people. Hence, this research adds new insight to the branding literature for brand managers within the seafood industry, as our impression is that the seafood industry takes it for granted that people view their industry as sustainable.

### 5.3.2 Managerial Implications

The obtained results of this study can help to draw several implications that can be applied for the managerial implication in the field of intention towards fish consumption, that would help for better understanding of how values, attitudes and social norms influence consumer behavior, and especially our findings on younger people aged 18 - 35 years old. More specifically, for brand managers, and other strategic decision-makers in a company in the fish industry, our findings indicate that younger people today have a slightly positive attitude towards fish. However, the more environmentally conscious they are, the worse their attitude towards fish is. Younger people are more concerned about the environment, however, there is a gap between their level of concern and action. In addition, social norms seem to have a slight impact on younger people today, and influencer's advice, expectations and encouragement is shown to influence younger people.

The most critical factor influencing consumer intentions to buy green products is *green brand positioning* (Mohd Suki, 2013a). In terms of enhancing the sustainability perception regarding fish, having an effective green brand positioning is vital in order to enhance consumer awareness. A strategic and accurate positioning strategy is important in order to meet consumer expectations, as consumers' attitudes become more positive and therefore influence product acceptance (Hartmann et al., 2005; Huang et al., 2014a; Mostafa, 2009; Wang, 2016). To improve green brand positioning, knowledge, and attitude, as well as environmental awareness in the minds of consumers, companies in the fish industry should directly position, promote, and advertise their green products through traditional and electronic media. This is critical because people are more inclined to purchase green items, and further, fish, if they recognize the brand (Mohd Suki, 2013a).

According to research, customer awareness of green brands is one of the most important elements that influences their decision to buy green products. As a result, firms should convey to consumers that they play a critical role in fostering a green business environment in today's competitive marketplace (Mohd Suki, 2013a). Therefore, a recommendation for marketers within the fish industry is to strengthen their green brand positioning through a good communication strategy. One possible option is to create a product message that highlights the sustainable attributes with fish and explain how consumers can contribute to the environment. Explaining the eco-friendly attributes of a product brand to consumers in a way that strengthens their understanding would help them make better decisions about green items (Montoro Rios et al., 2006). Especially since our findings indicate that younger people today have a slightly positive attitude towards fish. Also, based on the fact that the more environmentally conscious they are, the worse their attitude towards fish is. Moreover, younger people are more concerned about the environment, however, there is a gap between their level of concern and action. To increase current and potential consumers' green brand knowledge, companies must create an outstanding green brand identity that allows them to easily distinguish the benefits of eating green products (fish) from those of other brands (Mohd Suki, 2013a).

The respondents of this study who perceive themselves as environmentally conscious agree that fish farming has a negative impact on aquaculture, pollutes the ocean and that the industry throws away too much of their fish. In addition, numbers from Norges Sjømatråd (2020) supports this finding as almost 47 percent of respondents in a conducted survey believe that the industry does not take active environmental responsibility, and that one explanation factor might be that the level of knowledge about the industry is generally low.

Based on these findings it is vital to gain *trust* to young consumers, by communicating that the fish industry operates sustainable and environmentally friendly, in order to reverse these results. The desirable result of a trustworthy and reliable communication about how the fish industry is sustainable, is that the more environmentally conscious younger people are, the more positive attitude they have towards fish. We therefore assume that trust is critical for achieving higher environmental consciousness towards the fishing industry being sustainable (Richter et al., 2017). This requires a deeper understanding of how young consumers view the

fish farming industry, their environmental consciousness values and beliefs, and their perception of specific fish products. In this regard, young consumers may lean toward including their own personal set of considerations in the buying decision-making process after they have gained trust to the industry operating sustainably, which results in more precise knowledge on green products, and in this case, fish, such as how they are produced, promoted, and packaged (Mohd Suki, 2013a).

Further, they can implement comparative advertising to communicate sustainable benefits of eating fish (ACA and CAP, 2021). Promoting the positive sides of eating fish, such as low carbon footprint compared to e.g. red meat, can contribute to increased knowledge and consequently more awareness of the low footprint of fish (Nijdam et al., 2012). By promoting and providing information about sustainable attributes of a product, the consumer can interpret the role of the product's functionality and the possibility for them to judge the product as sustainable is greater (Gershoff & Frels, 2015). Furthermore, when consumers are aware and have the knowledge of the benefits of green products, and in this case fish, their level of awareness, interest, and demand may shift their buying behavior toward a greener lifestyle (Huang et al., 2014b).

If brand managers want to seek opportunities in using influencer marketing, our results show that social norms seem to have a slight impact on younger people today, and that influencer's advice, expectations and encouragement is shown to influence younger people. Influencers are viewed as knowledgeable, believable, and credible, and can potentially, by promoting brands, increase ROI up to 11 times compared to traditional marketing (Berger & Berger, 2016; Tapinfluence, 2015). Further, people in the age ranging from 16-35 are the most active social media users in Norway (Statista, 2020), and young Norwegians are active users of Instagram (Ipsos, 2020). According to a report from Statista (2019), Norwegian people have listed "Follow Brands/Companies" (30 percent) as their purpose of Instagram usage. This opens up for marketing opportunities by using influencers on Instagram who can operate as ambassadors for companies within the fishing industry, to promote and recommend brands and product's benefits.

Depending on the managers' strategic goals, influencer marketing may or may not be a good investment for the brand, as the choice of which influencers to promote the brand is crucial in order to gain trust to the consumer (Barker, 2019). The company must collaborate with influencers that align with the company's values, and also with an influencer who targets the desired audience and goals. These goals must be set carefully, and the target group in this case, are young consumers who worry about the future, and where the goal is to advertise brands and products that contribute to this. ROI can be measured in many ways, and the easiest one is direct sales (Unbox Social, 2020). However, the general heightened appraisal of the brand is often hard to instantly quantify with the use of influencer marketing, but can be measured by e.g. having campaigns, discount codes, track engagement rates or social media mentions (Unbox Social, 2020).

Our results reveal that there is a potential for improvement to achieve a more positive attitude towards fish among younger consumers in Norway, and that environmental consciousness influences consumers' attitude towards fish. This highlights the importance of smart branding, a strategic marketing mix, and a much-needed accurate and open communication plan focusing on transparency within the fish farming industry, in order to change attitudes. We, therefore, advise marketing managers to invest resources to invest deeper into young consumers' purchase patterns, how they perceive fish, and the level of environmental consciousness, as this can strengthen their attitude about the fish industry and increase sales of fish.

## 5.4 Limitations

Like all research, our study also has some limitations. First, our sample size is considered relatively big (N=452), but there is a skewed distribution between women (70 percent) and men (30 percent), which is not optimal, but adequate. Age is quite evenly distributed among respondents, 18-35 accounted for 50,5 percent of all respondents, and 36-70 years old accounting for 48, 4 percent. Since the additional purpose of this study is to explore differences between younger and older people, one can argue that our age distribution is optimal. However, the study aims to investigate younger people in Norway, and the sample size is therefore not considered optimal as the findings will be difficult to generalise to the



entire population of Norway. This weakens the external validity of the study.

The two attitudes that our research model has suggested to explain intention to eat and buy fish varied remarkably in their explained variance. Attitude towards fish explains 77 per cent of the variance in consumers' intention towards fish consumption. Contrary, attitude towards green food only explains 4.6 per cent of the variance in consumers intention towards fish consumption. Consequently, it is likely that other important drivers than attitude towards green food should have been included in this research model for achieving a higher explanation of intention. However, green food was chosen for our extended VAB-model as we were interested to see if there was any correlation between attitude towards green food, attitude towards fish and intention towards fish consumption. Additionally, we wanted to confirm previous research stating that environmental conscious people have a positive attitude towards green food. The correlation between attitude towards green food and attitude towards fish were significant at .001 level, however attitude towards green food only accounts for 5.6 percent of the variance in attitude towards fish. Hence, another attitude could have been chosen to strengthen the whole model.

Moreover, when asking people about their attitude towards green food, the norwegian translation used in the survey was “bærekraftig mat”, which is “sustainable food” in english, since there is no correct translation from english to norwegian regarding the term “green food” that is commonly used. Also, the study might be hard to replicate as the term sustainability can be both diffuse and abstract, and hard for people to define. Additionally, the term “sustainable” can have a different meaning for every respondent, which makes it harder to interpret the results and give clear statements. For future research, the meaning of sustainability can have a different meaning.

In order to investigate influencers' impact on especially younger people today, questions regarding social media usage and time spent on digital platforms should have been included in the questionnaire to give a basis for discussion. Due to this, the study lacks findings on whether younger people today get exposed for e.g influencer marketing and whether they have bought products based on influencer recommendations or promotions of a product.

In the time around the conduction of the online questionnaire, there had been a great amount of attention regarding a Netflix documentary called, "Seaspiracy" which was about plastic littering, overfishing and slavery at sea. This documentary could pose a threat to internal validity of the study, as the documentary may have influenced respondents into having a more negative attitude towards fish and that their answers may have been different under "normal" circumstances. Our online survey was posted in several public Facebook groups, and one group consisting mainly of younger girls, called "Av jenter for jenter". The post received several critical comments referring to the Seaspiracy documentary. As a result, there has been a rise in environmental consciousness, as well as a focus on making environmentally conscious decisions. It is difficult to say whether these attitudes are permanent or transient, or whether they even have had an impact on the study's outcome.

In addition to our findings, the thesis may have a potential selection bias due to the fact that the online survey was published in our private social platform, which may cause problems with convenience sampling. It is likely that a great number of the respondents are friends, family, colleagues, co-students, parent's friends etc., which may explain the high percentage of female respondents. Because convenience sampling does not allow for sampling from the entire population, it is known to have low external validity. As a result, the study cannot be used to generalize beyond the sample. The data collection process could be improved in future studies by using probability sampling. Furthermore, because the data was only obtained at one point in time, we are unable to make causal inferences. Future study could improve this, using a cross-sectional or similar design to provide for high internal validity.

## 5.5 Future Research

If we had the capacity to investigate related areas of research, there are several exciting areas to look further into.

The first suggestion is to replicate the study because there are not many other studies investigating the same. It is possible to incorporate a larger group. Despite the fact that the sample was diverse in terms of age, and somewhat less diverse in gender, we would recommend using the same formula. In order to gain deeper insight into consumer's value, attitudes, and behavior, demographics such as income, profession, and county together with

age and gender would give a broader foundation to discuss differences among younger and older. In addition, dinner habits can be of relevance to map consumers' fish frequency and choice of fish products.

Due to time limitations, demographic variables such as county, and income were not included as moderators in this study. However, our data revealed several interesting differences on both aspects. People living in the west coast area of Norway, have a more positive attitude towards fish (Møre og Romsdal; mean 6,2), compared to people living both south and east in Norway (Agder 5,1 and Viken 5,2), where 7 is top score. Therefore, including the county as moderator on the relationships of the VAB-model would add context to this study.

Research states that younger people are more environmentally conscious than older people, however, the statistics and the research are mostly conducted in other countries than Norway, which gives opportunities to examine this phenomenon more thoroughly in Norway. Therefore, another suggestion could be to gain deeper understanding of participants' value of environmental consciousness, by adding even more questions regarding this topic, Especially since the result from our study shows that older people, and women, are somewhat more environmentally conscious than younger people and men.

To acquire a more in-depth understanding of environmental consciousness, attitudes towards green food and fish, and intentions toward fish consumption, researchers may want to take a more qualitative study method, such as conducting interviews with a variety of consumers to get an understanding of their interpretations of their purchase patterns in relation to fish. It could also be useful to perform a true experiment in which consumers are observed in a real-world purchasing situation in order to better understand and investigate shopping behavior when customers engage with choosing and purchasing fish products. In addition, as discussed in chapter 5.4 *Limitations*, future studies should consider including other or additional factors on attitude towards green food, to provide a higher explaining level of variance for the extended VAB-model and intention towards fish consumption, such as health, which has been proved to be one of the main factors to eat fish. Also, future researchers might consider including the definition of “sustainable food” in the online survey, in order to ensure that respondents perceive the term likewise.

Even though friends weighed more than influencers when it comes to social norms, our results showed that influencers have a slight influence on younger people. This finding along with the increased use of social media will be an important research area for marketers and companies, as they must operate in new ways of branding, such as influencer marketing, in order to understand how influencers may influence the younger generations to come.

However, we believe this study provides significant insights into a new perspective, namely by investigating environmental consciousness, attitude towards green food and fish, and the intention to fish consumption, by adding both the influence of social norms and moderators of age and gender. It would be fascinating to investigate the same hypothesis with a bigger sample size in future studies. This could provide a more generalized insight into the topic.



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## 7.0 Appendix

### Appendix A: Excluded Questions

The following questions has been removed:

- Q11\_2.0 : Jeg er skeptisk til at norsk fisk blir sendt til Kina for filetering, for deretter å bli sendt til Norge igjen for salg.
- Q11\_3.0 : Jeg foretrekker villfanget fisk fremfor oppdrettsfisk for å ta hensyn til miljøet
- Q11\_5 : Det er viktigere at jeg får i meg fisk jevnlig, fremfor hvor bærekraftig fisken er produsert
- Q32\_4 : Plast og avfall i havet som kommer fra fiskeri- og oppdrettsnæringen er et problem
- Q32\_5: Bærekraft er en viktig faktor når jeg velger hvilken fisk jeg skal spise

### Appendix B: Correlations including Question 11\_1.0

Q11\_1.0 : “Det er mer bærekraftig å spise fisk enn kjøtt”

Correlations															
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Q11_1.0															
2. sumECG2	.24**														
3. sumECF	.86**	.13**													
4. sumECO2	-.11*	.24**	-.17**												
5. sumHOLDfisk	.45**	.04	.67**	-.12**											
6. sumINTfisk	.41**	.01	.62**	-.16**	.83**										
7. sumHOLDgf	.35**	.55**	.31**	.15**	.23**	.22**									
8. sumVmiljø	.26**	.51**	.23**	.22**	.11*	.11*	.48**								
9. sumImiljø	.12*	.24**	.02	.04	-.11*	-.08	.19**	.43**							
10. sumVbær	.20**	.31**	.20**	.05	.12*	.14**	.32**	.44**	.21**						
11. sumlbær	.14**	.12*	.13**	-.07	.12*	.13**	.14**	.18**	.32**	.24**					
12. sumVfisk	.18**	.12*	.26**	.01	.28**	.27**	.21**	.30**	.12*	.48**	.30**				
13. sumlfisk	.15**	.14**	.18**	-.05	.16**	.20**	.14**	.20**	.23**	.25**	.68**	.37**			
14. sumVpåv	.21**	.17**	.27**	.02	.23**	.30**	.19**	.34**	.12*	.52**	.30**	.65**	.35**		
15. sumlpåv	.19**	.07	.23**	-.04	.16**	.22**	.12*	.27**	.35**	.34**	.43**	.34**	.54**	.56**	

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

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

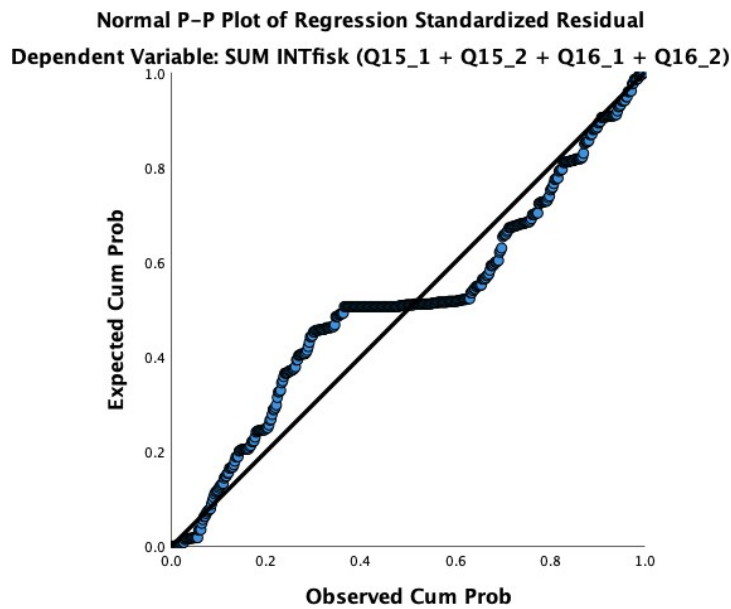
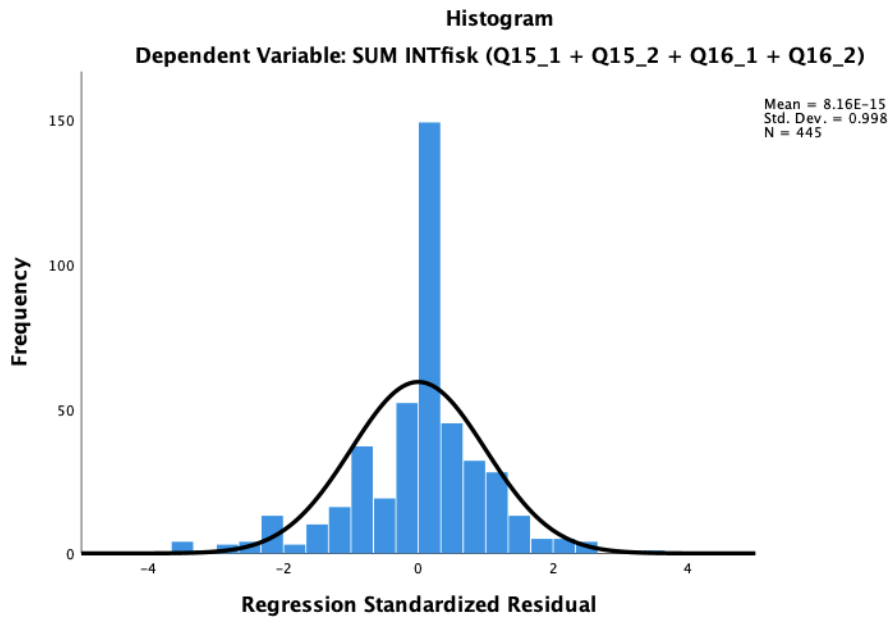


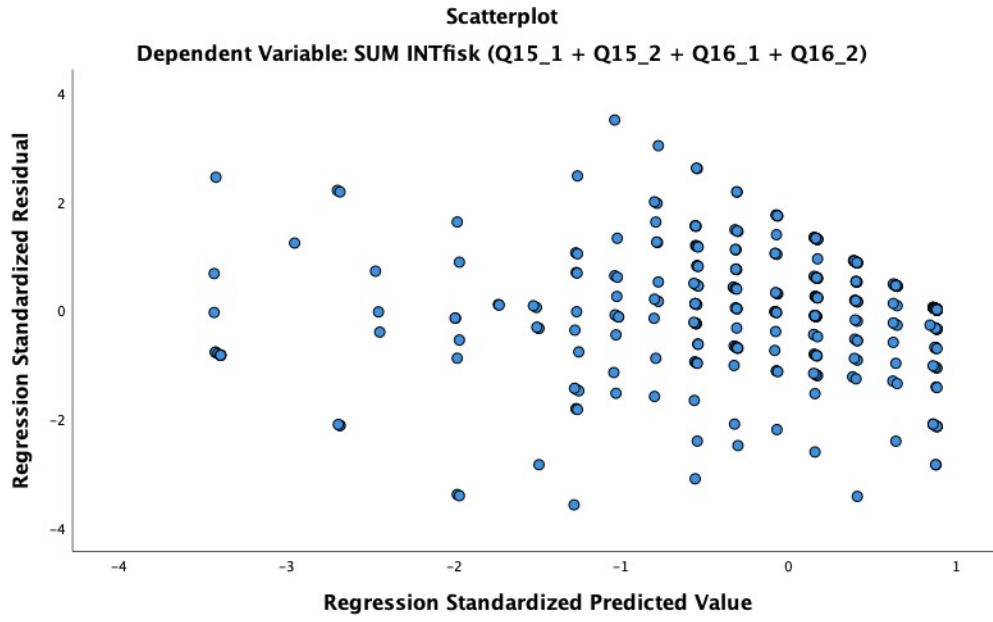
## Appendix C: Assumptions for Multiple Regression

Histogram, P-P Plot and Scatter Plot for independent and dependent variables

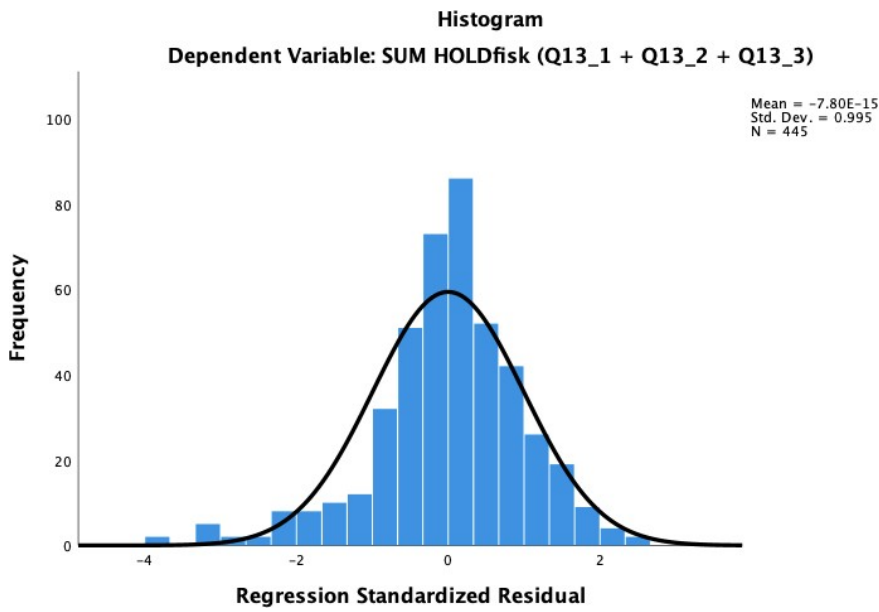
Dep: sumINTFisk

Indep: HOLDfisk + HOLDgf:



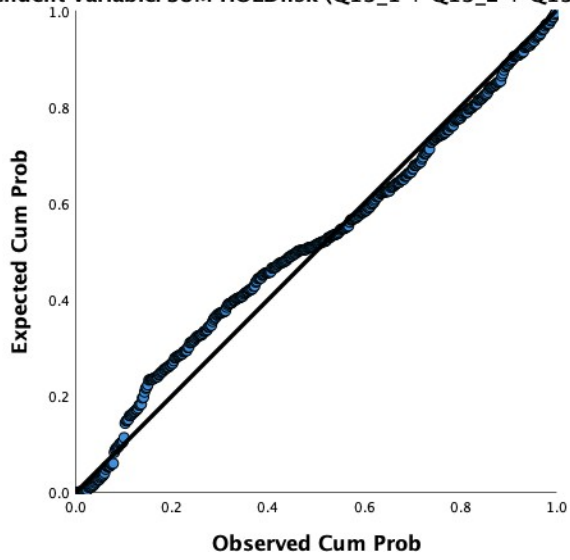


Dep: HOLDfisk,  
Indep: EC, HOLDgf

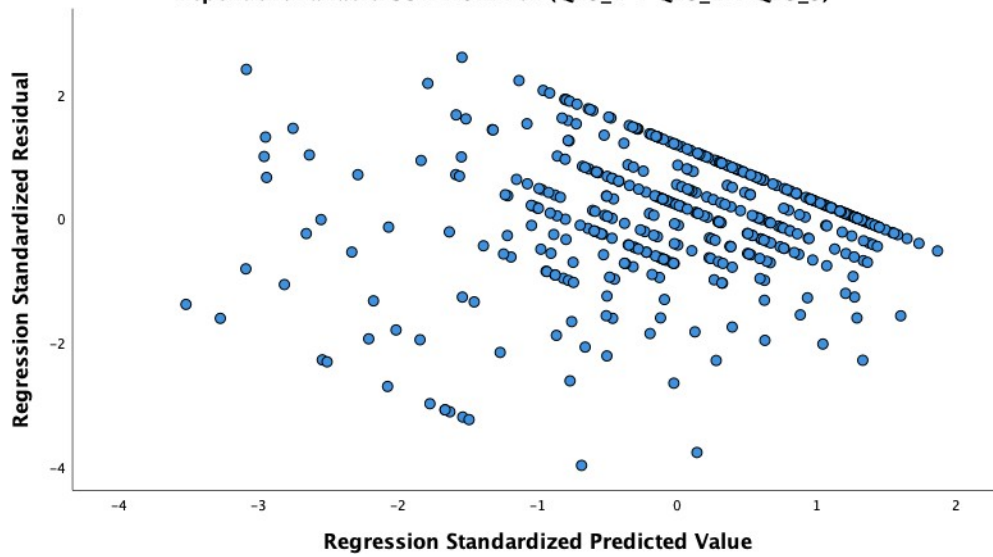




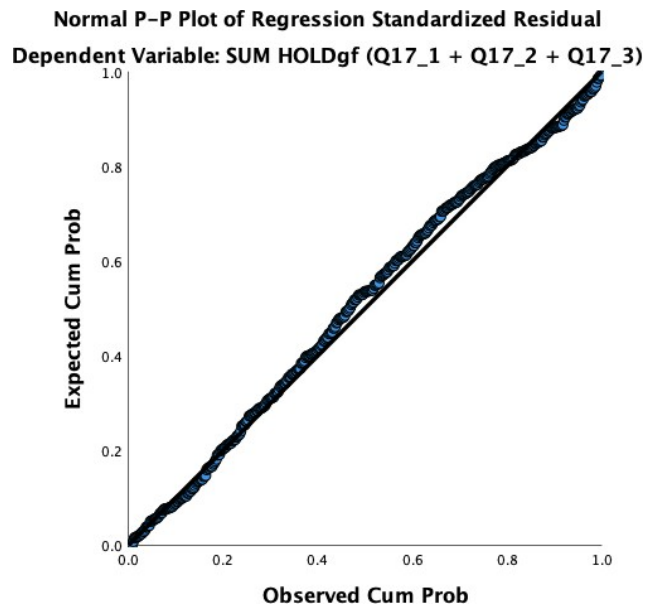
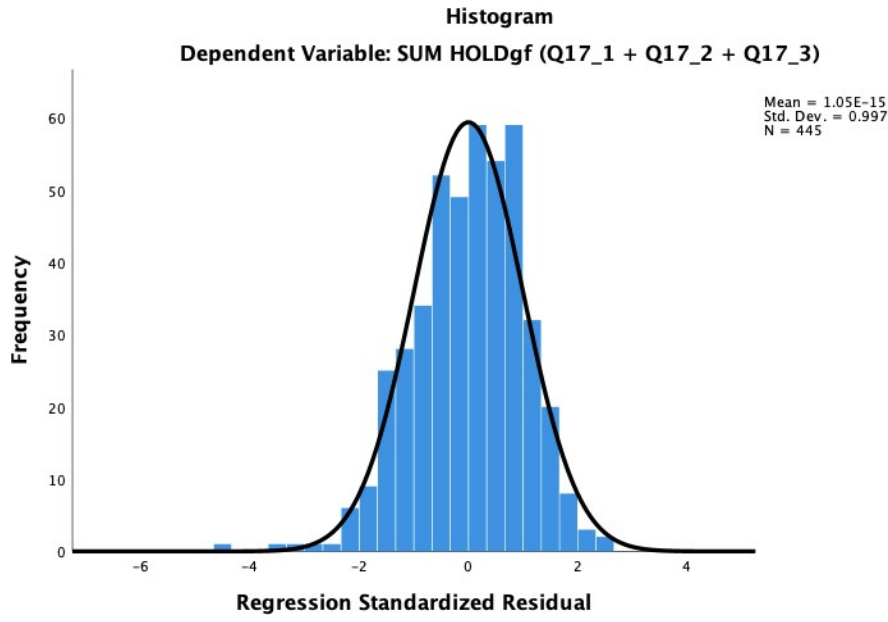
**Normal P-P Plot of Regression Standardized Residual**  
Dependent Variable: SUM HOLDfisk (Q13\_1 + Q13\_2 + Q13\_3)

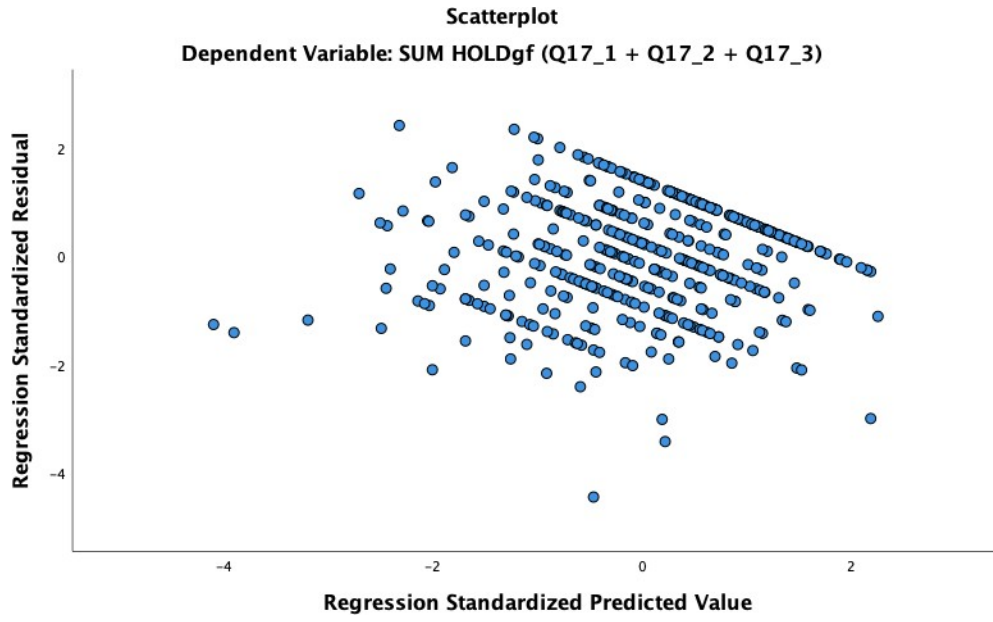


**Scatterplot**  
Dependent Variable: SUM HOLDfisk (Q13\_1 + Q13\_2 + Q13\_3)

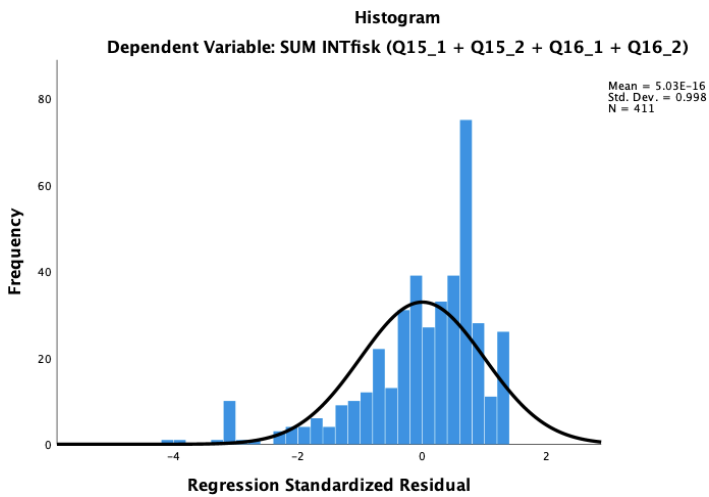


Dep: HOLDgf  
Indep: EC



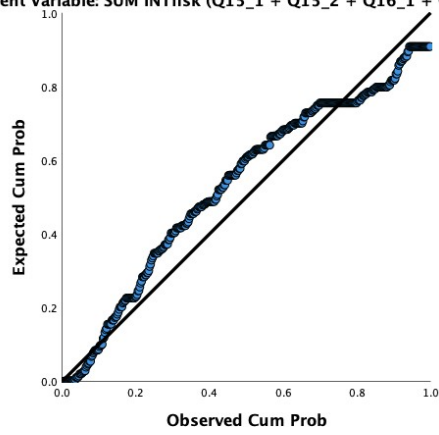


Dep: INTfisk  
Indep: Social norm (influence friends and influencers)  
Excluded: Influencer

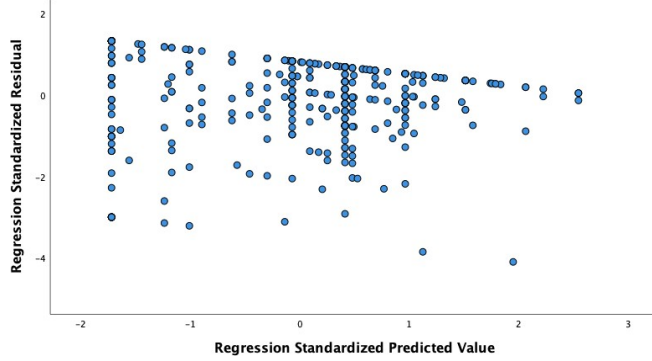




**Normal P-P Plot of Regression Standardized Residual**  
Dependent Variable: SUM INTfisk (Q15\_1 + Q15\_2 + Q16\_1 + Q16\_2)



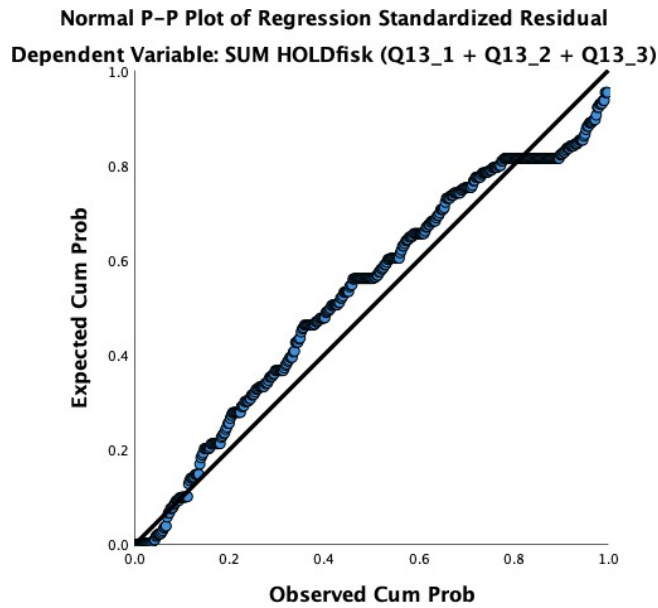
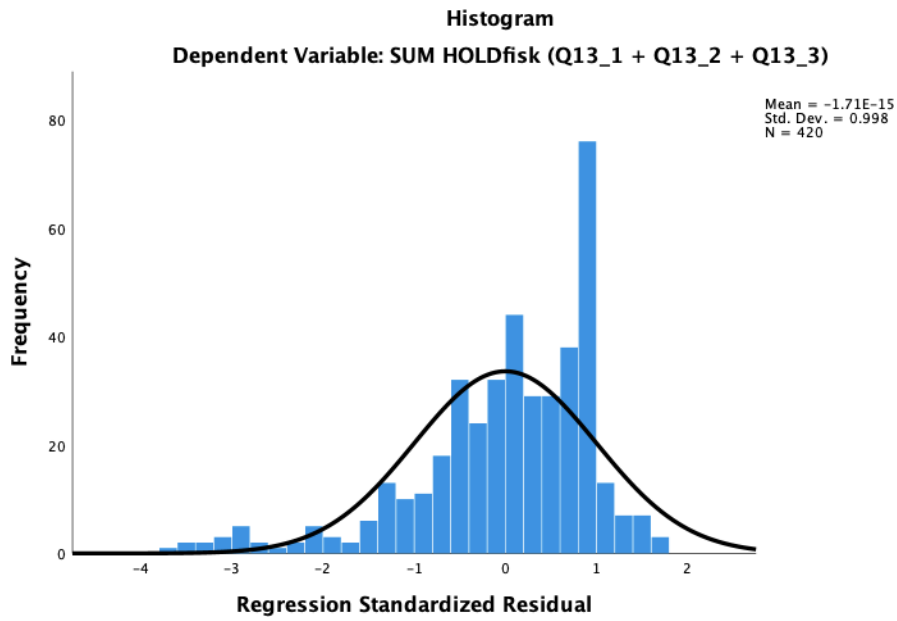
**Scatterplot**  
Dependent Variable: SUM INTfisk (Q15\_1 + Q15\_2 + Q16\_1 + Q16\_2)



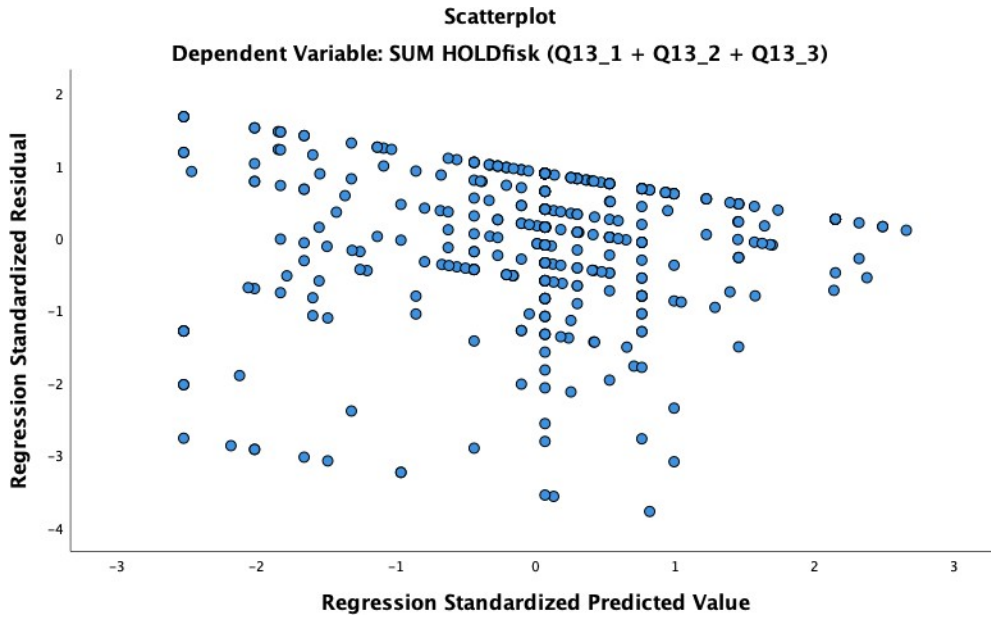


Dep: HOLDfisk

Indep: Social norm (fish friends and influencer)



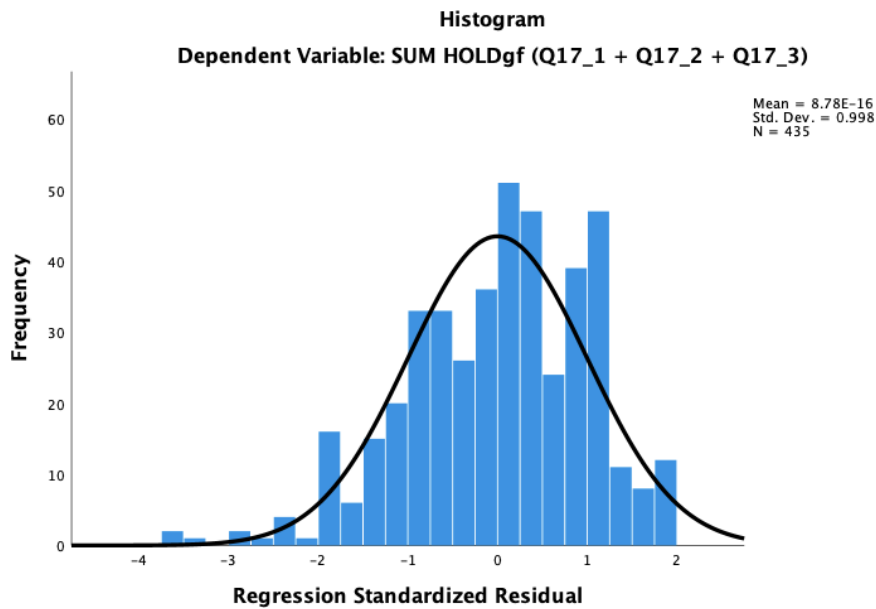




Dep: HOLDgf

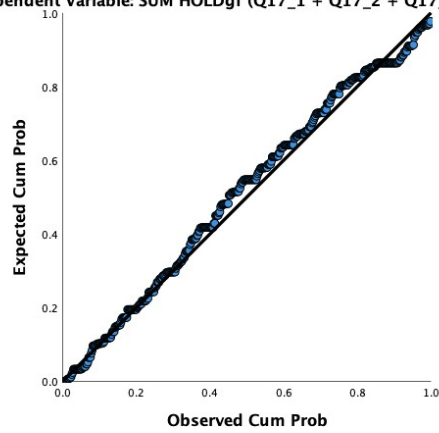
Indep: Social norm (Green food friends and influencers)

Excluded: influencer



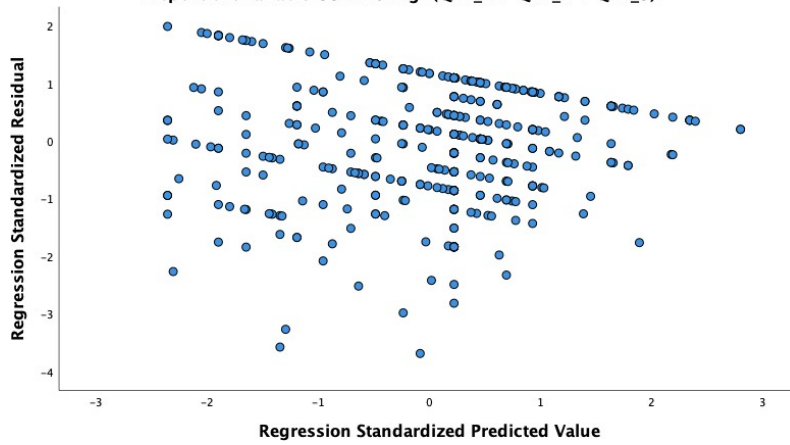


Normal P-P Plot of Regression Standardized Residual  
Dependent Variable: SUM HOLDgf (Q17\_1 + Q17\_2 + Q17\_3)



Scatterplot

Dependent Variable: SUM HOLDgf (Q17\_1 + Q17\_2 + Q17\_3)



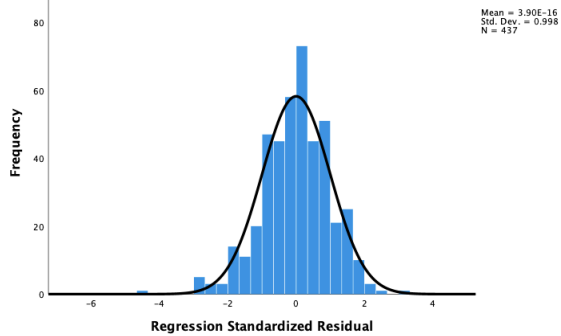
Dep: EC

Indep: Social norm ( miljø venner og influencer)

Excluded: Influencer

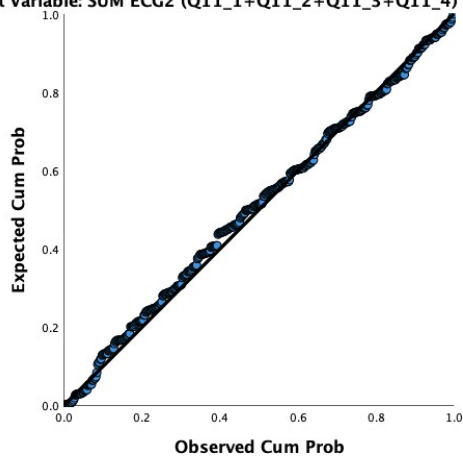
Histogram

Dependent Variable: SUM ECG2 (Q11\_1+Q11\_2+Q11\_3+Q11\_4) - sterkest

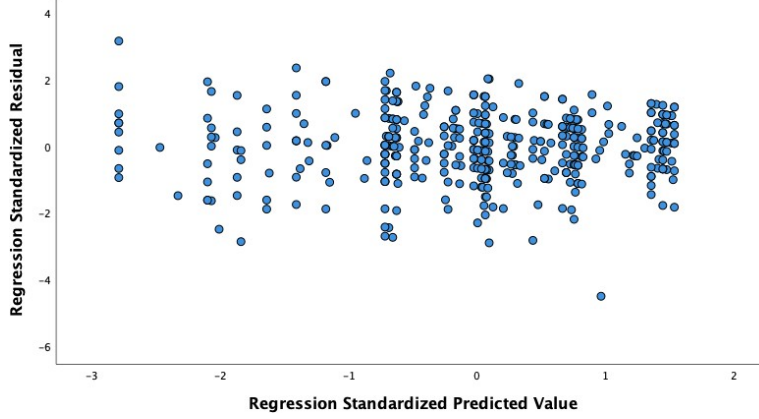




**Normal P-P Plot of Regression Standardized Residual**  
Dependent Variable: SUM ECG2 (Q11\_1+Q11\_2+Q11\_3+Q11\_4) - sterkest

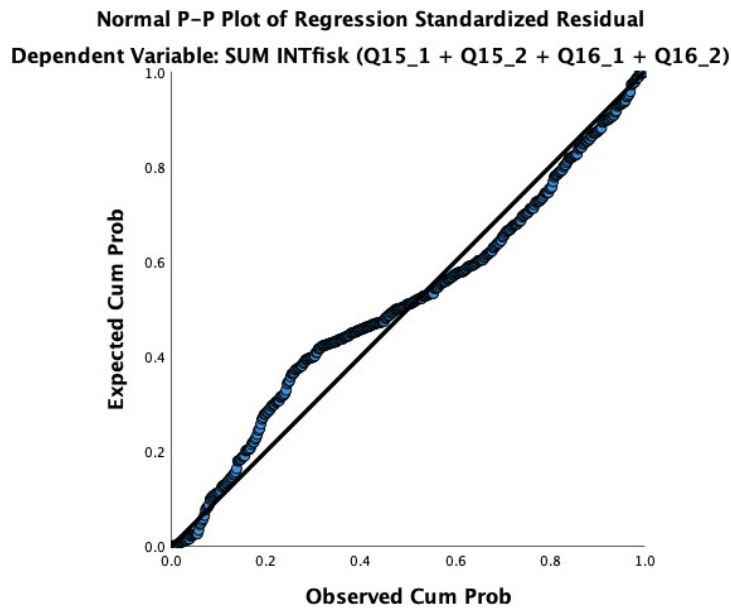
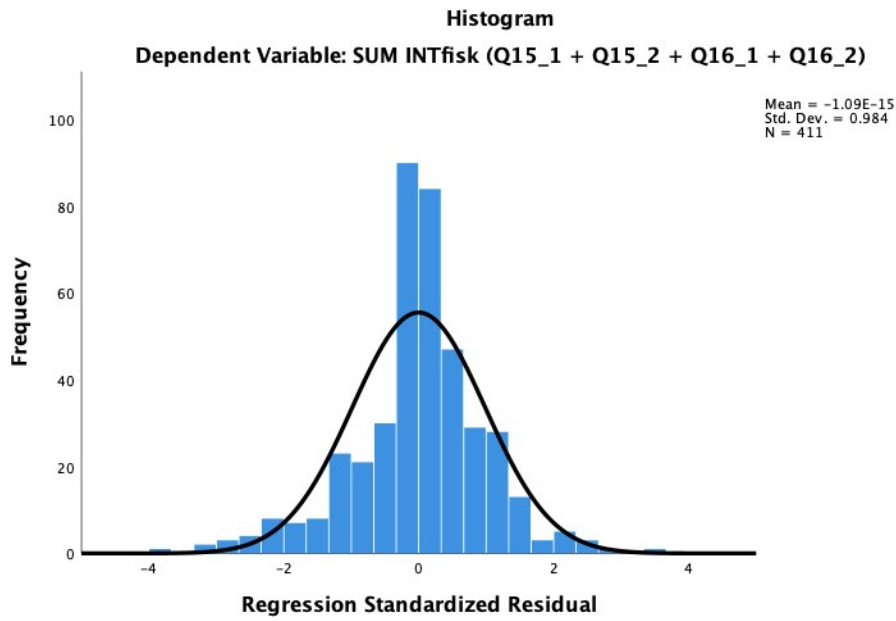


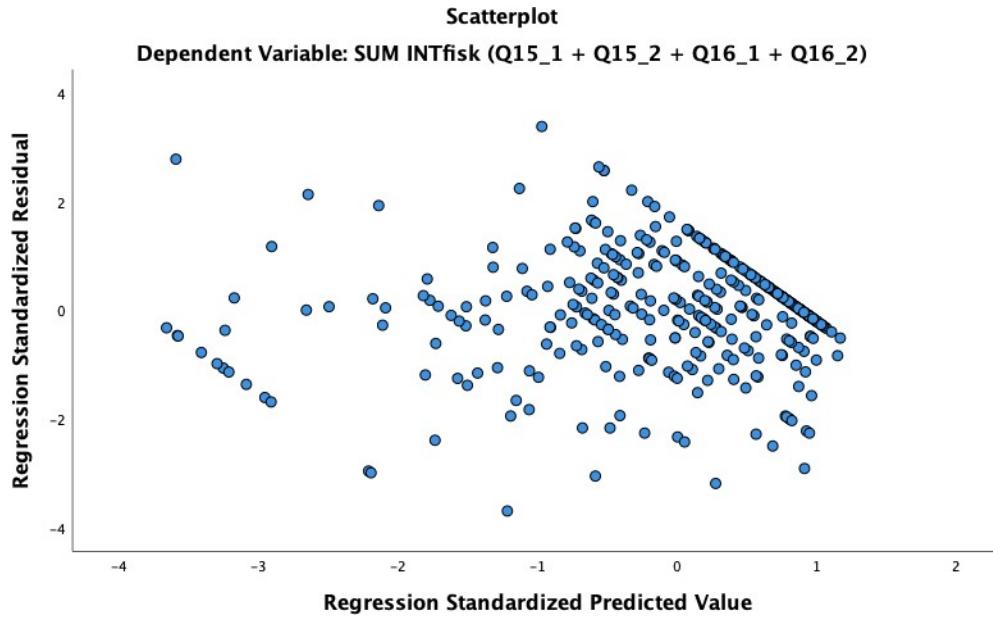
**Scatterplot**  
Dependent Variable: SUM ECG2 (Q11\_1+Q11\_2+Q11\_3+Q11\_4) - sterkest





Dependent: Intention Indep: all other factors





### Appendix D: Mean split EC General, Age

#### Case Processing Summary

	Included		Cases Excluded		Total	
	N	Percent	N	Percent	N	Percent
SUM ECG2 (Q11_1+Q11_2+Q11_3+Q11_4) - sterkest * AlderUngGammel	446	100.0%	0	0.0%	446	100.0%

#### Report

SUM ECG2 (Q11\_1+Q11\_2+Q11\_3+Q11\_4) - sterkest

AlderUngGammel	Mean	N	Std. Deviation
.00	5.2221	215	1.03999
1.00	4.9513	231	1.05813
Total	5.0818	446	1.05696



## Appendix E: Mean split Attitude Towards Fish, Age

### Case Processing Summary

	Included		Cases Excluded		Total	
	N	Percent	N	Percent	N	Percent
SUM HOLDfisk (Q13_1 + Q13_2 + Q13_3) * AlderUngGammel	446	100.0%	0	0.0%	446	100.0%

### Report

SUM HOLDfisk (Q13\_1 + Q13\_2 + Q13\_3)

AlderUngGammel	Mean	N	Std. Deviation
.00	6.2248	215	1.09070
1.00	5.3478	231	1.51985
Total	5.7706	446	1.39945

## Appendix F: Linear regression, Age, Gender

Q11\_4.0 “Jeg anser fisk som en bærekraftig råvare” (age, gender)

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.324 <sup>a</sup>	.105	.101	1.523

a. Predictors: (Constant), AlderUngGammel, ModKjønn

### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	119.896	2	59.948	25.835	<.001 <sup>b</sup>
	Residual	1023.318	441	2.320		
	Total	1143.214	443			

a. Dependent Variable: Jeg anser fisk som en bærekraftig råvare

b. Predictors: (Constant), AlderUngGammel, ModKjønn

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.020	.149		40.336	<.001		
	ModKjønn	-.408	.159	-.116	-2.567	.011	.995	1.005
	AlderUngGammel	-.945	.145	-.294	-6.516	<.001	.995	1.005

a. Dependent Variable: Jeg anser fisk som en bærekraftig råvare



## Appendix G: Linear and multiple regression VAB-model

ENVIRONMENTAL C.		R	R <sup>2</sup>	β
Dependent	Independent			
Attitude Fish	EC General	.674	.454	EC Fish: .678***
	EC Fish			EC General: -.054
	EC Fish farming			EC Fish Farming: -.003
Attitude Fish	EC Fish	.672	.451	EC Fish: .672***
Attitude Fish	EC General	.032	.001	EC General: .032
Attitude Fish	EC Fish Farming	.129	.017	EC Fish Farming: -.129**
Attitude Fish	EC General	.678	.459	EC Fish: .655***
	EC Fish			EC General: -.099**
	EC Fish farming			EC Fish Farming: -.011
	Attitude Green Food			Attitude Green Food: .088**
Attitude Green Food	EC General	.611	.374	EC Fish: .261***
	EC Fish			EC General: .502***
	EC Fish farming			EC Fish Farming: .074
Attitude Green Food	EC General	.556	.309	EC General: .556***
Attitude Green Food	EC Fish	.313	.098	EC Fish: .313***
Attitude Green Food	EC Fish Farming	.149	.022	EC Fish Farming: .149**
INTENTION FISH CONS.		R	R <sup>2</sup>	β
Dependent	Independent			
Intention Fish Consumption	Attitude Fish	.877	.769	Attitude Fish: .877***
Intention Fish Consumption	Attitude Green Food	.214	.046	Attitude Green Food: .214***
Intention Fish Consumption	Attitude Fish	.877	.769	Attitude Fish: .875***
	Attitude Green Food			Attitude Green Food: .007
Attitude Fish	Attitude Green Food	.236	.056	Attitude Green Food: .236***



## Appendix Ha: Linear regression, Age, Gender

<b>MODERATORS:</b>				
<b>ENVIRONMENTAL C.</b>				
<b>Dependent</b>	<b>Independent</b>	<b>R</b>	<b>R2</b>	<b>Beta</b>
EC General	Age, Gender	.236	.056	Age: -.143** Gender: .199***
EC General	Age	.128	.016	Age: -.128**
EC General	Gender	.189	.036	Gender: .189***
EC Fish	Age, Gender	.243	.059	Age: -.239*** Gender: -.029
EC Fish	Age	.241	.058	Age: -.241***
EC Fish Farming	Age, Gender	.064	.004	Age: -.060 Gender: -.019
EC Fish Farming	Age	.061	.004	Age: -.061
<b>ATTITUDE TOWARDS:</b>				
Attitude Fish	Age, Gender	.317	.101	Age: -.310*** Gender: -.050
Attitude Fish	Age	.314	.098	Age: -.314***
Attitude towards Green Food	Age, Gender	.149	.022	Age: -.092 Gender: .124*
Attitude towards Green Food	Gender	.118	.014	Gender: .118*
<b>INTENTION:</b>				
Intention towards Fish consumpt:	Age, Gender	.286	.082	Age: -.279*** Gender: -.047
Intention towards Fish consumpt:	Age	.283	.080	Age: -.283***





## Appendix Hb: Linear regression, Age, Gender

<b>MODERATORS</b>				
<b>SOCIAL NORM</b>				
<b>Dependent</b>	<b>Independent</b>	<b>R</b>	<b>R2</b>	<b>Beta</b>
SN Friends Environment	Age, Gender	.275	.075	Age: .002      Gender: .274***
SN Friends Environment	Gender	.275	.075	Gender: .275***
SN Influencer Environment	Age, Gender	.385	.148	Age: .196***      Gender: .316***
SN Influencer Environment	Age	.221	.049	Age: .221***
SN Influencer Environment	Gender	.331	.110	Gender: .331***
SN Friends Green Food	Age, Gender	.113	.013	Age: -.067      Gender: .096*
SN Friends Green Food	Gender	.091	.008	Gender: .091*
SN Influencer Green Food	Age, Gender	.077	.006	Age: -.051      Gender: .062
SN Influencer Green Food	Age	.046	.002	Age: -.046
SN Influencer Green Food	Gender	.058	.003	Gender: .058
SN Friends Fish	Age, Gender	.100	.010	Age: -.100**      Gender: .015
SN Friends Fish	Age	.098	.010	Age: -.098**
SN Influencer Fish	Age, Gender	.168	.028	Age: -.156***      Gender: .077
SN Influencer Fish	Age	.149	.022	Age: -.149**
SN Friends int. Fish consumpt.	Age, Gender	.149	.022	Age: -.149**      Gender: .001
SN Friends int. Fish consumpt.	Age	.149	.022	Age: -.149**
SN Influencer int Fish consumpt.	Age, Gender	.127	.016	Age: -.046      Gender: .123**
SN Influencer int Fish consumpt.	Gender	.119	.014	Gender: .119**