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The impact of fast food ’s sustainable initiatives on people

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Summary

In my master thesis I would like to explore how sustainable initiatives from fast food companies impact the life of customers and how fast food could benefit from it. Based on past literature some gaps have been found and they led to the creation of my research questions:

"How fast food's green initiatives influence values and behaviors of people? Will these initiatives bring new market segments to the companies? And also, is the reduction of guilt derived from the consumption of environmentally sustainable food a cause for a higher demand of fast food items?".

The fast food topic is of high interest for companies since in the past few years new trends on sustainable processes led customers to claim from companies more environmentally aware practices. So, it should be relevant for them to find out what are the environmental actions from companies that push consumers to a firm rather than another one, for example, would customers be pushed towards a fast food chain that cares more about environment or people's health?

Moreover, as I will explain in the next sections, past literature missed to cover the gap regarding the behavior of heavy users of fast food, being those researches more concerned onto studying the green consumer. My research then will not only focus on the green consumers side, but also on the other spectrum of consumers: consumers that are frequent eaters of fast food.

In the introduction I will talk about the latest trends in the food industry and in particular the emerging trends of environmental sustainability, in fact, customers consider themselves as more environmentally friendly now than ever. Subsequently, I will also write about some examples of firms in this industry that are already implementing some changes. For example, Max Burgers, a Swedish fast food chain that listening to customer's complaint it removed excess packaging and saw an increase in sales for that item (S. van Gilder Cooke, 2012). Then, I will follow it by explain which are the pros and cons of approaching greener solutions.

In the literature review, I will touch theoretical topics like the value-action gap and explain what moral licensing and the rebound effect are.

With the help of past studies' theories, I will then develop my assumptions for this research. After analyzing my dataset, I will then proceed into making my

conclusions on the topic and to suggest some solutions to this problem. Moreover, I will dedicate part of the end of my thesis to write about some limitations and possibilities of future researches on topics which I didn't give enough attention to for this research. Lastly, the References and Appendix will follow.

1. Introduction

Over the last few years companies felt the urgency to shift their attention towards an emerging trend: Environmental sustainability. Customers have become more attentive on what they buy and, as studies from the Centre for sustainable business found out, the business of sustainable products is growing way more than their non-sustainable counterparts. In fact, as the study from 2013 to 2018 shows, there has been a growth of 29% for sustainable products compared to the non-green competitors in the category (Kronthal-Sacco & Whelan, 2019). And, as Peter Drucker said: "It is the customer who determines what a business is, what is produces, and whether it will prosper" (Drucker, 1954). Further, because of the possibility to gather more information, consumers have become more aware of the damage that certain firms, belonging to the food industry, have not only on the planet but on their own health too. This is one of the reasons why firms have felt the need to advertise their sustainable initiatives on their media, since that would direct the attention and money of various and heterogeneous consumers to their restaurants. Interestingly, among those who foresee a change in the manufacturing process we find companies like McDonalds, that aims at relevant goals like having fiber-packaging made out of raw material that comes from certified sources where no deforestation occurs (Altmin, 2018), and to source the 100% of their packaging from renewable or recycled sources by the end of 2025 (Altmin, 2018). Moreover, lately they're also increasing their menu options by adding vegetarian alternatives to their menu. But we should be careful because this, doesn't necessarily mean that they will substitute anytime soon their original menu to a more environmentally friendly one. This means in other words that, by keeping the current environmentally damaging behavior, they will implement the options by including an eco-friendlier menu. Of course, at the same time these fast food restaurants are also making substitutions regarding the eating utensils, like replacing the plastic straws with paper ones or by using tissues derived from recycled paper. But are these alternatives actually better for the environment than the original ones?

One of the most famous and infamous fast food chains that is following the eco-friendly path is McDonald's. McDonald's Norway in particular, integrated in 2019 the "McVegan Nuggets", a vegetarian alternative to the very much-loved original chicken product (Petter, 2019). But McDonald's is not the only one, also Subway

and YUM! Brands Inc., owner of franchises like Pizza Hut, KFC and Taco Bell, are shifting to meatless options menu items and greener food's production.

However, we should keep in mind also that the competitive advantage of these companies relies on the convenience of the products and its price. Further in the report, this topic will be analyzed more in depth because studying who we are dealing with is the starting point of the investigation. But to briefly introduce the topic to the reader, the means to achieve this convenience often relies in cheaper raw materials like cow meat, fish, poultry, wheat and grains, to say some, needed in huge amounts, which hence allow such economies of scale leading to cheaper prices. Reaching economies of scales in these restaurants usually involves meat and crops to be produced with intensive farming techniques (Bailey, Froggatt, and Wellesley, 2014). Therefore, will they be able to keep the low prices they have now if they change to a more sustainable alternative? Or will the green implementation be enough to justify the possible price increase to the eye of the customer? This is an important issue since fast food's customers are usually driven by the convenience of the offerings. (Pilon, 2014)

Moreover, we should also consider the possibility that these changes have a further marketing purpose: increase their market share. By showcasing their green efforts, these firms will not only be able to reach their regular customer base, but they will also increase it by acquiring new customers. As for the new category of consumers acquired, we can consider low fast-food consumers that, if before the green introductions, were partially or totally against the fast-food item, now with the introduction of the cited menu option, they might become more prone to try it. But then we should also consider if this could be an effective way to increase market share and hence, profits, or if the change in menu options will not bring new consumers and therefore be useless for a further increase in market share. The environmental issue is very broad, past researches have focused the attention on more wide-ranging values that encompassed politics and economics (Leiserowitz, Kates, Parris, 2006) and others focused the attention only on customers with stronger green consumption values (Haws, Winterich, Naylor, 2014). Conversely, little to no attention has been given to customer's more personal and internal values like motivation, pro-environmental knowledge, awareness and many more (Kollmuss and Agyeman, 2002). So, the focus of my research project will focus on the consumer behavior when faced with the green initiatives and food alternatives

from fast-food chains. I will not only study their purchase intention when considering between a regular fast-food item and a green alternative, but I will also find out their knowledge level, comparing the self-perception of knowledge about the environment to their actual knowledge. Moreover, I will test if the sample taken into consideration is going to manifest moral licensing when faced with a green choice option. Of the many objectives that my research will study, one of the findings that I personally consider more interesting is to reveal how many people of the sample will consider themselves knowledgeable about environmental issues and how many will actually have that expertise on the topic. Also, it is going to be interesting to find out to which of the two categories that we will take into consideration, either non-green consumers or green consumers, they belong to.

Therefore, the research questions I am going to answer through my thesis are the followings: "How fast food's green initiatives, and customers' own perception of knowledge on environmental issues, influence purchase intention of fast-food? Will these green initiatives bring new customers to the companies? Is the moral licensing derived from sustainability issues a cause for a higher demand of meat? And lastly, who are the most knowledgeable on environmental issues between heavy and non-heavy consumers of fast-food?"

In the subsequent chapter it is going to be provided a literature review that will recall some past theories to help better understand the current research.

2. Literature review

It is impressive to think that just in the USA 1 person out of 7 is a heavy consumer of fast food. To be clearer, this amounts to a total of 50 million Americans that choose to consume fast food very often if not daily (DiRaddo, 2018). The reasons that lead to this high consume is the promise of a quick and easy to get food that tastes good (Rydell, Harnack, Oakes, Story, Jeffery, French, 2008). This led to an increase in damage not only to the environment but also to people's health. Lately, thanks to environmental trends occurred in the past few years customers are becoming more environmentally conscious. But, according to past literature there is a mismatch between what people would like to do to be more environmentally friendly and what they actually do. This gap is called value-action gap (Olson, 2013).

2*.1 The value action gap*

According to (Kollmuss and Agyeman, 2002) the value action gap on environmental issues is represented by a disparity between the value placed on the natural environment and the level of action taken by individuals to counter environmental problems. With this in mind, we might ask ourselves, do people really know what is good for them and the environment? Or they are just feed with companies' claims of turning their products eco friendlier by just changing ingredients or raw materials to an alternative that might look green but that in reality is doing more damage than good? The study will take inspiration from Kollmuss and Agyeman's model which at the same time was based on previous studies made by and Ajzen & Fishbein (1980) and Rajecki (1982). This model in fact showcases how the environmental behavior is influenced not only by external factors but also by internal ones like motivation, environmental knowledge, values, attitudes, environmental awareness and more. Moreover, according to another research (Olson 2013), the value-action gap is created also in the moment where a person considers buying a green product and is faced with different tradeoffs. In a survey published in the Harvard Business Review, it is shown the reality of value-action

gap in the everyday life, in fact, 65% of the respondents said they wanted to buy purpose-driven brands that advocate sustainability, yet only about 26% actually did so (White, Hardisty & Habib, 2019). For example, let's consider a middle wage consumer in the act of choosing between a green product and a non-green one. When faced with the two options, even though his internal motivation to buy more eco-friendly products and his concern about environment are moderately high, his money saving motivation could be higher that the eco-friendly one, showing therefore the mismatch between values and behaviors. Since past researches applied this concept only to strongly green customers, now we are going to apply it to a wider variety of people, not only the more environmentally conscious ones but also the less green consumers which are the heavy fast-food consumers that we discussed earlier. With this in mind, we pave the way to the creation of the first question that is going to be discovered through my research: the presence of a value-action gap between values and beliefs regarding the environment and the purchase intention of fast food. This takes inspiration from past studies which found that consumers wanting to switch to a diet with less meat consumption are more entangled with environmental causes (Wellesley, Happer and Froggatt, 2015). For the sake of my research I assume to find that: the greener the type of consumer thinks he/she is, the more he/she will trade a regular fast-food option for a greener one. The aim of this study is relevant to firms approaching green causes because I will not only explore if this could be a relevant marketing strategy able to bring more customers, but I will also study to what extent people's own beliefs impacts on it. But also, I will examine if the guilt reduction from the consumption of more sustainably alternative food, encourages an increase in consumption, caused by moral licensing due to the choice of a real or perceived green tradeoff which gives to the consumer a justification of their consumption. This effect of nullifying the positive impact of the green initiative that derives from an increased consumption of the green item is called: rebound effect. Many studies focused on companies going green, what was the reason why they did that and what was the outcome they were hoping for. Even though this food industry has been deeply studied I want to take on a new direction and analyze the current situation starting from the customer's point of view. The problem with the fast food industry unfortunately is that most of the times consumers are not properly educated and sometimes they end up making choices that appear to be eco-friendly without actually being like that.

And since most of the times companies use these green claims to induce more people into buying the products, like we might think about the plastic straws that are being substituted with paper straw that are not biodegradable and contrary to the plastic ones are not even possible to be recycled, it's important to address this topic because people often choose the green alternative over the regular one, but as we are going to see, green doesn't necessarily mean better for you or the environment, and people are not aware of this. Therefore, my research will methodically approach this debate by proposing a test of ten questions to the sample to verify their actual knowledge on environmental sustainability issues and also how much they are certain of the answer given. I would assume that the people that consider themselves as eco-friendlier than the average, would score high on the certainty of their answer but, the key of my research is to compare if they will also score high to the test inside my research survey.

2.2 The sustainability issue in fast food market

According to Wognum et al. sustainability is defined as "a situation in which the needs of the present generations are met, without impeding on the satisfaction of needs of future generations" (Wognum et al., 2010) and because of the fast growth of the population and the increased need for food and cultivable lands, the satisfaction of future generations is at a stake. We are at a crossroads, people require organic food, which is produced in inefficient farms, but the inevitable population growth requires also abundant production of meat and crops which rhythms cannot be sustained by an inefficient farming. This vicious cycle is also backed up by these sustainability trends where people, I assume, do not even have the critical spirit to inform themselves and make the right decision for the environment and themselves, which not always is the obvious one as my research will find out. Therefore, we should check if their shopping habits reflect their values and beliefs, or if for example the possibility to upgrade their menu option with a more amount of food for a little price increase, the so-called upsizing, will make them drift away from the original purpose. We also have to study whether they are conscious of the benefits or damages of their lifestyle choices and if they know about of the consequences that some environmentally sustainable actions imply, in fact, since

there is scarce literature on this matter, during this research we will exactly test whether the people that consider themselves knowledgeable on sustainable issues are actually experienced on the topic or not. My assumption is that nowadays, being feed with waves of news about food and environment by a huge amount of sources, some more reliable than others, the consumer find himself confused on what to believe and a lack of a critical mind may lead them to trust facts that not always tell the truth.

2.3 Why customers choose green products?

To better understand the issue, it is important to also get the reasons why people are claiming for greener food choices.

From the Wellesley, Happer and Froggatt (2015) research, it turns out that people underestimate the influence of meat and dairy production on the climate change because they are not aware of the actual negative outcome of that type of production and indeed believe that the main problems are deforestation and emissions. In general, we could assume that people are not very well educated on the subject and adding to that is also the belief that shifting to a completely vegan diet has to be the best solution for a greener future. But many researches actually contradict that belief. A study conducted by Dockrill, P. (2015) shows in fact that if a person would replace the same number of calories of a steak with the same number of calories of broccoli then, the emissions of food of broccoli could actually be less environmentally friendly than meat. Moreover, other studies show how starting a vegan diet without having the right amount of knowledge on the issue could cause more damage to the environment than a meat-based diet. An Italian study found out how people that sustained their diet mainly on fruits would have a larger environmental impact than the one expected (R. Gray, 2020). Let's just consider how some perishable food requires transportation through air, which produces more CO_2 emissions than consuming local fruits and vegetables. To give a concrete idea, from the same article we can read how in UK, for every kg of asparagus coming from Peru, it is created more than 5 kg of carbon dioxide.

But we should then ask ourselves, why people act green? Many are the reasons to this behavior as I am going to analyze more in detail, but for sure, past literature is

vocal about the effect of culture and egoism on it. As for the first one, it has been found out that the higher the level of education, the more people care about the environment. This phenomenon is confirmed by a study by Pirani and Secondi. According to this study, the majority of people who live in the most developed and rich countries have an inclination to undertake green habits, in fact over 96% of European citizens agree on considering the protection of the environment as a fairly important task (Pirani, Secondi 2011). Furthermore, these people feel that taking care of the environment derives primarily from a sense of moral obligation (Pirani, Secondi 2011). The main aspect to not underestimate is the "moral licensing" effect applied in our case, to fast foods. As I anticipated before, the "egoism" in this is to be intended as the personal gratification derived from a green behavior. More in detail, the theory explains that "moral licensing occurs when past moral behavior makes people more likely to do potentially immoral things without worrying about feeling or appearing immoral" (Monin & Miller, 2001) in other words, people who prospect to perform a positive act in the near future, feel less guilty into behaving contrary to their action in the present time. This effect could also be able to explain us, how the sustainable claims could actually push people into choosing to consume a fast food product that claims to have a green outcome, an example could be consuming a coke at a McDonald's, if before a consumer x would abstain himself to the purchase of that item, with the introduction of paper straws we assume the subject feels morally licensed to buy it because he thinks he's not doing as much of a damage to the planet as he would have done with a plastic straw. Therefore, this could end up in promoting the adoption of their food and increasing not only the value-action gap we talked about before but also consumption, leading to a rebound effect.

2.4 Paving the way to sustainable changes.

For a company to succeed in this era, where there is a multitude of options to choose from, it is important to stand out from the mass. In a time where the majority of products and services are more and more standardized, the firm that is most likely to succeed is the one that offers something different from the others. That is why recently, many companies focused their attention to listen to what customers had to

say. This is what Rohit Deshpandé considers a customer centric company (Deshpandé, R. 2014). Since in the last few years, environmental sustainability has become a very discussed topic among customers, companies had to keep the pace with trends. But this not only encompasses a reach for environmental sustainability practices, according to an article from Forbes, other customer's trends have both emerged and increased in the food industry. For example, from 2014 to 2019 we saw an increase of 136% in volume of conversations regarding the topic of vegan food (Mordoukoutas, P. 2019). But also, in 2015 we saw the creation of the Paris Agreement where all countries pledged to the long-term goal of reducing emissions by 2050 (Dimitrov, R. 2016). Both the Paris agreement and the requests from customers that were soliciting more eco-friendly processes were the triggers that pushed companies into taking action and promising changes in the long-term. Fast food chains were not slow into implementing this. Considered by many as the "main culprits" of pollution, the sustainable controversy had to be handled soon so to not lose market power.

Since sustainability is one of the main concerns of people when it comes to think about fast food chains (DeBiase, F. 2018), fast food companies launched campaigns with claims about reduction in plastic usage, renewable packaging and so on. As the McDonald's Chief Supply Chain Francesca DeBiase says, consumers were mostly worried about the packaging waste, and so a pledge to use packaging coming from recycled waste by 2025 was made (DeBiase, F. 2018). But McDonald's is not the only fast food chain implementing these changes and claims, many others followed the trail. For example, this year the fast-food chain KFC announce they intend to substitute the chicken nuggets meat with a laboratory made meat that supposedly will have a very close taste and resemblance to the original meat. This collaboration with 3D Bioprinting Solutions is publicized in the KFC website as a "more environmentally friendly" option with its first testing planned for this fall in Moscow (KFC, 2020).

But also, the main McDonald's competitor, Burger King, is not lagging behind. by proposing an alternative to their Whopper: The Impossible Whopper. Even thought, since its release in August 2019, the burger faced criticism from vegans. In the next paragraph we will in face see the duality of these green practices. If from one side firms are shifting to an environmentally sustainable alternative to their current

processes, on the other side these companies seem still not prepared to serve the segment of customers these products mainly aim for.

2.5 The main problem with fast food's "green" manufacturing.

As it was briefly introduced before, the reason why these companies decided to shift to a more sustainable future is to keep the customers loyal, possibly increase market share and adhere to the Agreement's directives. But these types of firms basically rely on the availability of enormous quantities of meat. Meat is considered one of the main pollutants in the agricultural industry so how would they cooperate with that?

There are a lot of factors that could negatively impact these goals, for example what would be the threshold to which a balance between meat and meat-less alternatives is reached and that it also satisfies the consumer?

And furthermore, from the point of view of environmentally conscious people, would they really believe these claims since the economy of fast foods is based on meat and single use packages? Are consumers aware that "green" doesn't necessarily mean vegan or vegetarian?

The aim of the following research is to find out not only if current fast-food consumers would be actually interested in trying and switching to a green fast-food menu option. But also, which are the values and practices that would push new consumers' segments to approach the fast foods. I am in this case referring to people that would rather not eat fast food on a regular basis but that if their values are matched by the company. I am therefore going to research whether the implementation of a fast food item focusing either on environment or people's health and diet could move them to purchase from fast food chains that sell products with either one or the other. Then, because of moral licensing they could be spurred into becoming themselves new fast food's clients. We saw in the past how this created much agitation in the past. When introducing a new process into a well-established one, it is important to cure every detail. The lack of this led to a lively court discussion in 2019 between Burger King and an unsatisfied customer. The argument revolved around this episode where the standardized cooking methods of Burger King were used to cook a meatless burger. In this case the customer,

following a vegan diet, was shocked to see how his meatless burger was not so meatless. In fact, the burger itself was cooked on the regular grill where meat burgers were cooked. So, the customer sued Burger King with the claim of animal byproduct on his burger. To these accusations Burger King decided not to comment. We could understand the customer's point of view but at the same time, the fast-food chain never advertised this as a vegan product. The lesson we can retrieve from this episode is that it will take time to these fast-food chains to adapt to the requests of these new categories of customers. Is this sprint towards acquiring more market enough to justify the expenses needed to answer to their requests?
Lastly, the study will find out how an increase in consumption, due to more consumers eating fast food could generate another problem: the rebound effect.
This effect is a consequence of moral licensing. In fact, a higher request of meatless burgers made out of vegetables, sponsored by the now guilt-free meat movement, could have a worse effect on the environment (A. Tugend, 2019). This negative effect could overcome, according to a study conducted in 2014, the positive ones prompted from the green initiatives (Bailey, Froggatt, and Wellesley, 2014).

2.6 The main problem with human behavior

People are biased and irrational. According to a research on the irrationality of people (I. Brocas, J. D. Carrillo, 2003) people can have that kind of behavior when, in the case of looking for pleasure, they end up harming themselves. We can observe this in the fast food market. People are looking for treats and easy meals but they're trading that off with health and a brighter future for the environment. In this research I would like to find out how much this tradeoff translates into wanting to purchase fast food and saving the environment. The introduction of greener options on the menu, I assume, is going to help cooperate with that and hopefully I will find significant results from my analysis of both the purchase intention analysis of green items and not, and the guilt relief from the moral license effect due to that purchase.
At the same time, people are also bounded in their knowledge. Bounded rationality, as described by Herbert A. Simon in 1996, is: "The meaning of rationality in situations where the complexity of the environment is immensely greater than the computational powers of the adaptive system.". If we apply this theory to the fast

food industry and sustainability issues, we could assume that people, given the huge amount of different and various information on environment, are not capable of learning all that is to know about sustainability. This might translate in my research into having green people that believe they have higher knowledge on the topics, compared to the average, but in reality, their actual knowledge might be average or below. This could mean that people have consequently a knowledge gap on sustainability issues that were not aware to have. And lastly, because of bias like the confirmation bias, we could find that people that had prior knowledge on sustainable issues, like the green category of people, could end up being certain of their correctness on sustainable matters that in reality, are incorrect.

3. Methodology

This research is part of a study aimed to uncover and describe the possible existence of changed behaviors of consumers due to the introduction of sustainable initiatives, but also to find out if these have an impact on their usual consumption pattern caused by the relief of guilt through moral licensing. The survey proposed here is a quantitative study with an inductive approach. Then, I will be able to generalize the sample findings to the whole population to hopefully find interesting discoveries on my topic. My research is based on a series of questions and a multiple-choice test where only one of the four answers was the correct one. The questionnaire can be divided into four blocks, the first block asks questions related to their own perception of how sustainably conscious they are, it is made of six questions measured with a 7-point Likert scale ranging from "Strongly disagree" to "Strongly agree". In this first part I looked for items that would measure the respondent's own perception of how sustainable he is intended to act. Then, we are going to compare the average results of the first block with the results of the test to see if people that consider themselves more knowledgeable than the average will answer correctly to most of the multiple questions on the test.

The second block consists of a test made of ten multiple choice questions. The questions located in the appendix, are inspired by a previous study on sustainability knowledge called "ASK" which stands for Assessment of Sustainability Knowledge. This previous study conducted by A. Zwickle and K. Jones in 2018 will help us to test the effective knowledge that our respondents have on sustainability issues. The past research filed a list of twelve elements, and I found some relevant questions to insert in my thesis among those. Some other questions in my thesis derive from other scientific papers regarding the topic that can be found in the references.

To study my assumption, my professor and I decided to collect qualitative data through a series of interviews from specific people, which belonged to both the categories of heavy users of fast-food and people that considered themselves as very close to the environmental causes, which I intended to call them: the heavy green-food users. Unfortunately, due to the pandemic I was unable to collect this type of data since that required to find these people in the physical stores and interview

them in person. For this reason, I proceeded with quantitative data and wrote a survey.

Since I still needed to classify my respondents according to their actual knowledge, I proceeded to ask questions that supposedly had the aim to uncover the true knowledge they have on environmental causes. Hypothetically, the respondents that consider themselves as very knowledgeable on sustainability, should score high both on their own perception of sustainable knowledge but also on the test too, but this would mean that people would have a perfect perception of themselves which is not true in reality, people are dominated by different bias. Moreover, I tested also the certainty of people for the answer given on a 5-point Likert scale. My research will then try to find out what happens in the real world and what is people's actual knowledge of sustainable behaviors and if they are certain of the answer given.

Then, in the third block of my survey, I asked questions related to respondents' actual daily tasks to see if those actions would match with the answers given at the beginning of the survey or if the answers confirm the presence of a value-action gap among the respondents' behaviors. It is here where I will actually confirm or dismiss the presence of a value-action gap between the values and beliefs of people and their actual actions. The fourth block consisted of demographic questions like age, sex, income and occupation to better understand the population sample and to see what the trends of the population are. We could find out for example if the value-action gap is more evident for people with low income or with lower education or if they're still students.

According to the theories examined before in the literature review, my thesis will investigate:

- The presence of a value-action gap between values and beliefs regarding the environment and the purchase intention of fast food;
- The level of self-perceived knowledge of sustainable issues and actual knowledge;
- What is the effect of these initiatives for the environment and people's health and diet on both categories of consumers, the fast-food daily users and those that predilect a green lifestyle;
- The effect of moral licensing on the guilt of the two classes of consumers due to the purchase intention of sustainable fast food;
- If we find a causal effect from moral licensing to increase in consumption.

Hopefully this research will give us enough insight and to find relevant information as to generalize the findings to a bigger population.

I presented the survey to a convenience sample because of the limited possibilities due to COVID-19 pandemic. The population was comprised of 47.7% belonging to the male population and a 52.3% of females. Among them, the majority of respondents belong to the age range 19 – 25 and 26 – 35, hence we can say that the respondents were fore the majority young people, the 93.5% of people belong to the age range 19 – 35. These people were either students (69.2%) or full-time workers (26.2%). This is highly possible to the fact that I took a convenience sample and shared the survey among my university colleagues and also in my working environment. The level of education spans among the three categories of "high school", "bachelor's degree" and "master's degree" even if the majority of respondents are highly educated having achieved a master's degree level of education. The education percentages are respectively 9.3%, 36.4% and 51.4%.

Among all the respondents we can already start to see the fast food tendencies that we are going to further analyze in my research. But at the moment, we could start by looking at the consumption frequencies of fast food. From the table in the appendix "Weekly fast food habits" we can see two main trends, the first one where the respondents apparently consume fast food products mostly once a week or less, which means that they might consume less than once a week but still they consume fast food products some time during the month. The other side of the spectrum sees more dispersed habits but still the 35.5% of people answered that they consume fast food between 5 to 7 or more times a week, which is a very relevant data for us because this means that, even if I gathered a convenience sample, I still have a very heterogeneous sample population.

Now to my assumptions, I expect sustainable initiatives to truly have a weak effect for heavy fast food consumers, this is because according to a research by National Geographic (2014) "many consumers, especially those who eat meat more regularly than others, do not think that meat consumption is environmentally detrimental" hence I expect my first assumption to be confirmed by the future data collected.

For the second assumption it is important to consider the awareness gap of green food consumers. In fact, what is missing is complete education on the impact of sustainable initiatives on the environment, since surprisingly, some vegetables have a higher impact on the environment than some types of meat like pork and chicken

(Bailey, Froggatt, and Wellesley, 2014). This is important to take into consideration because, in case fast food chains would offer a sustainable product that isn't seen as purely following the well-known and practiced habit of shifting from plastic to paper, then customers might cater their attention to a product that might seem more eco-friendly but that in reality, by doing some research, it could turn out to be more harmful for the environment. I will then expect more informed people to actually investigate and then trust the green initiatives of fast food companies and possibly to try out the products of a company that is pushing to a greener transaction. This, if supposedly correctly achieved with the best intentions from the restaurants, could bring to a segment of people that wasn't firstly attracted to that type of catering, but that now in reality could be interested in the matter.

As for the third assumption, according to previously cited theories, I am expecting a positive effect of moral license on purchase intention. The relief of guilt we assume, will spur people into consuming more of the green alternative item deriving from the positive feeling people experience towards themselves and the environment.

4. Data analysis

Of the multitude of responses, I was able to gather 107 valid responses, among which, I have more than 30 respondents for each category that I will examine, making it possible to analyze the data with a standardized normal model. The responses were then further analyzed through the software SPSS. As first approach to our data, it was important for us to do some data cleaning, removing all the inconsistent answers and also the incomplete ones. Afterwards, I carried a reliability analysis on the Likert scale for respondents' own perception of knowledge on environmental sustainability to test whether I had internal consistency for the items used. According to a study of K. S. Taber, a result is considered acceptably good if the Cronbach's α is superior to around .70. Our results show an $\alpha = .920$ hence my results are to be considered reliable.

Then, I proceeded to carry out a confirmatory factor analysis with the oblique rotation called Varimax to reduce the items into fewer factors, the aim of this confirmatory analysis is to find out if the Likert items I used for the own perception of respondents' on knowledge can be summed up into one single factor. The KMO test of sample adequacy has a value of .880 so this means that we have a fair good adequate sample, moreover the Bartlett's test of sphericity $\chi^2(15) = 580.243$, $p < .000$ indicates that our correlation matrix is adequate for a factor analysis, hence we followed with the confirmatory factor analysis. From it, the results show, as expected, the presence of one main factor. Factor 1 is comprised of six items reported on a 7-point Likert scale, it explains 72.380% of the variance with factor loadings ranging from .564 to .942. I proceeded to call this factor "Own perception of knowledge on sustainability". Therefore, this factor, extracted with the eigenvalue criterion, explains a total of 72.380% of variance which is sufficient for the purpose of my research. Moreover, after having created the new factor, I proceeded into creating a dummy variable where the value "0" is associated with non-green consumers and the value "1" is associated with green consumers. It's in fact these two categories that we will take into consideration during my research. Out of a total of 107 respondents I found out that a total of 45 people belongs to the non-green category while the remaining 62 respondents belong to the green consumers category.

4.1 Studies on value-action and knowledge gap.

As previously explained, my research will focus firstly on finding out if there is a value-action gap between values and beliefs of people and their intention to buy fast food. To do so, I will compare the own perception items with the purchase intention to buy fast food in the future. At the same time, I will distinguish between green and non-green consumers to find out what are the differences in behavior when purchasing fast food. I will compare then the scores of the own perception of their values and beliefs among green and non-green consumers and see if their intention to buy is high or low. To distinguish among green and non-green consumers I will take into consideration the Factor 1 we found out through the Factor Analysis. Given the theory, I would expect the green consumers to have lower scores for purchase intention of fast food.

By observing our data, we can see how in our population, between non-green consumers ($M = 5.07$) and green ($M = 4.3$) we would expect the non-green consumers to most likely purchase fast food in the future. But as we see the differences between the groups are still very small and possibly, we would not find that much of a difference in behavior between the two groups. To give a more scientific outline and confirm my results, I proceeded with executing an unpaired t-test $[t(105) = -1.960, p = .053]$ between the two types of consumers and the purchase intention. What I found by comparing the two groups' means is that, given our results, the two groups act in a very similar way, hence, as correctly predicted, there is no statistically significant difference between these two groups: green and non-green in their purchase intention behavior and they are most likely to buy fast food in the near future.

Moving on with our second assumption, I want to find out which of the two categories of people has better knowledge on sustainable matters. We might assume that green customers have higher knowledge on sustainability issues, but, after having compared the two groups I have found that, when faced with the test in my survey, both categories answered very similarly, finding no statistically significant difference among the two groups. The only difference could be seen for two questions, Q.1 and Q.4 where the majority of green people answered correctly,

contrary to the non-green people. At the same time, we could examine how certain are the respondents of the correctness of their answers. Are people sure of what they are saying is correct? With the help of a t-test to compare green and non-green customers, I found out that all the respondents were on average nor certain or uncertain ($M_g = 3{,}9;\ M_{ng} = 3{,}8$) of the answer given. This means, that from my survey we can say: green and non-green have on average the same level of certainty, or shall we say, same level of a "somewhat certain" answer.

4.2 Studies on purchase intention behavior.

For what concerns our third element to investigate, we will now look at the attractiveness of these sustainable initiatives for both categories of consumers, the green and non-green customers. To do so we shall take in consideration the purchase intention of green and non-green respondents when confronted with the question of whether they feel enticed to switch from a regular fast food option to the green choice and then comparing this result to the regular purchase intention variable. By doing a t-test $[t(90.586) = 5.024; p = .000]$, we can see how for the two categories green $(M = 5.24; SD = 1.314)$ and non-green $(M = 3.89; SD = 1.418)$ there is a statistically significant difference in purchase behavior. This means that green respondents are more likely to switch to a green alternative rather than the non-green respondents. Moreover, if we look at the purchase intention of green fast food in the near future, we can confirm the different purchasing behaviors of green and non-green. In fact, there is a statistically significant difference $[t(105) = 2.533; p = .013]$ between the means of the two groups green $(M = 5.15)$ and non-green $(M = 4.36)$. We can conclude that green and non-green have different behavior when it comes to purchasing green alternatives of regular fast food items, if green consumers are more likely to accept the sustainable introduction, we can't say the same for non-green consumers.

4.3 Studies on guilt relief and purchase behavior.

It is interesting to study also what happens when fast food companies propose to consumers products that are aimed towards the protection of the environment or

also towards products that are better for the people's health or diet. Which one should be the most profitable for companies to focus on?

To study this, I launched a t-test for both initiatives and found out the following results. Both green ($M = 4.81; SD = 1.469$) and non-green ($M = 4.60; SD = 1.615$) are likely to buy a sustainable initiative because it makes them less guilty towards the environment, but also people feel less guilty towards their own health and diet, in fact green ($M = 4.74; SD = 1.514$) and non-green ($M = 4.87; SD = 1.517$) have similar means on guilt relief. And by using a pairwise test I confirmed that people don't find any difference when they're buying a green alternative that releases the guilt towards the environment or their own health. This tells us that fast food companies could direct their marketing efforts both to products that relieve guilt towards the environment or to products that have beneficial effects on health and diet, and which hence relieve guilt towards those. People would buy those products because in both cases they have a guilt release but, if we see at the purchase intention of green fast food studied before, we can suggest that companies should direct these products towards green consumers because they're more likely to buy them, instead of the non-green consumer.

4.4 Study on moral license and increase in consumption.

- The effect of moral licensing on the guilt of the two classes of consumers due to the purchase intention of sustainable fast food;
- If we find a causal effect from moral licensing to rebound effect.

The previous study brings us to another research question, connected to the prior: is there any effect of moral licensing? In particular, do we find an increase in consumption caused by the relief of guilt?

For my last study we are then going to analyze my last assumption which is looking for an increase in consumption of the green item given the diminished guilt deriving from the fact that, being the item less detrimental for the environment or themselves then people feel like they can afford to consume more of it.

We are therefore analyzing the last question of our survey: "If I were to purchase an environmentally friendly fast food option, I would likely buy a larger size that I

would if purchasing a regular fast food option" and explore the results. I expect then to find a higher percentage of people that would agree with the affirmation.

From the table 4.3 in the appendix we can see how the percentage of the general trend of people is to disagree with the statement, which means that in general, people (43%) would not increase the size of green food ordered compared to the regular one. But this percentage is not very significant since we have a 39.25% of people that would on the contrary increase the size of the fast food option, and also, a 17.75% are either indifferent or still have to choose whether increase or not the food size. Therefore, another deeper analysis is desired. If we look at the differences among category of consumers, we have a totally different scenario. If we consider the non-green part of the sample, we can see how a huge part (62.22%) of people would increase the amount of food, while just the 24.44% would keep the size of the green food choice, the same as the regular one. This shows that the rebound effect for non-green consumers is quite strong. Moving on to the green consumers, the results show how the results are quite the opposite. In fact, the 56.45% of respondents belonging to that category would not increase the amount of food consumed. And also, like in the other case, the 22.58% of the opposite spectrum would agree on increasing the size of their green alternative. This behavior is quite interesting to observe, for the non-green respondents we see how the around 60% of them would likely buy a larger option, while for the green respondents is totally the opposite as around the 60% would choose not to increase the size. This is the reason why when observing the general trend, we had very equal results, because both categories have opposite behaviors. To conclude, we do find a rebound effect for non-green consumers, but we do not find a rebound effect for green customers. The reasons for this behavior could be further explored in future researches. But, as far as we can assume with the data we gathered, we could say that, being the product considered less harmful for environment and health, people, in particular non-green ones, feel they are allowed to consume more given the fact that they feel less guilty of causing damage.

5. Discussion

Given the latest trends on the market, I wanted to focus on one in specific: sustainability initiatives. In particular, I wanted to focus on the initiatives coming from fast food chains, considered by many the most popular cause of pollution. This topic has been largely studied already, but with the passing of time, it feels like there are always new interesting topics arising that need further analyses. I hence decided to take from past studies some subjects that needed to be studied from a different perspective. Many researches, like the majority that I took into consideration to write this research, focus on studying the so-called green consumer. But I wanted to study also the behavior of the other side of the spectrum, the non-green consumer. My respondents therefore range from the people that can be considered as green and don't eat fast food at all, to the people that are avid fast food consumers. This research is aimed to both fast food companies that are interested into finding out what are the main behaviors of the market population, but also for the people that are interested in the topic and want to know more about this. First of all, I wanted to find out about the existence of a value-action gap. In my case I studied how the values and beliefs of people towards the environment affected the purchase intention. The goal was to find a value action gap for the green consumers and the results positively confirm that. By firstly asking a series of question about their own perception of how green they consider themselves, and then a question about their intention to buy fast food I reached the conclusion that the majority of people, both green and non-green will still consider buying fast food in the future.

At the same time, the second issue my thesis covered, was to find out the level of knowledge on sustainability. I found out that not many past researches studied this subject, and the ones who did, like the "ASK" research I took inspiration from, only considered green people. I therefore decided to take this into my own hands and, after having requested the permission from the authors of the ASK research I proceeded into creating my own having that one as inspiration and modelling that to make it more relevant for the fast food topic. I wanted to test whether the level of self-perceived knowledge would match the actual knowledge, the results from this test showed on the contrary that people are not well informed and neither certain

of the correctness of what they know on sustainability topics. But not only, as if this was not worrying enough, from the data gathered I noticed how people who answered the test, were more certain of the correctness of the wrong answer than of the correct one.

Moving on from the point of view of the customers and their likelihood of not being knowledgeable enough to make the best choice for the environment and themselves too, causing a value-action gap, we now can shift to what happens to the customers behavior when purchasing. In my research, I focused on the purchasing behavior before and after the introduction of the sustainable initiative. I discovered that, given the majority of people would purchase fast food in the near future, when faced with a green option, the non-green category of people is not likely to substitute the regular to the green option, while for the great majority of green people there is a will to do the change. Moreover, I also found out that the green category is also more likely to buy green fast food in the near future.

In addition, I studied also whether which kind of green initiatives a fast food should opt for, depending to which product people would feel a relief of guilt and hence consume more. Should the company opt for a product focused on releasing guilt towards the environment or towards the diet and health of its customers? Well, from my study we see how this doesn't make that much of a difference because people feel less guilty of purchasing fast food whether they're purchasing something that reliefs guilt to both the environment or themselves.

On a negative note on the other side, we find that if people consume the "green" option, they feel a reduced sense of guilt that pushed them to consume more quantity of the item. This event is likely to nullify the "sustainability efforts" of the green products and therefore this could mean on the long run a worse outcome for both the environment and for people themselves since a higher consumption of fast food could worsen their health.

To conclude, I consider my research relevant not only for companies, but also for people interested in the topic. First, for companies is relevant because it's a further study on the consumer and its behaviors. Moreover, given the trend on sustainability that we could observe lately, it's important to see what the best marketing choices are according to customers' preferences, so to avoid unnecessary expenses on products that would not be appreciated by the market. On the other side, for people interested in sustainability and sustainable initiatives, it's important

to increase their awareness and critical mind to hopefully make them understand that the majority of people is not well informed on the topic.

6. Limitations & Future researches

During my research I have met some limitations, for example regarding the sample. The majority of people would belong to the age range of 19-35 years; hence, it would be relevant to look for a more heterogeneous sample. Moreover, a qualitative survey to support this and future studies would be a nice addition. Unfortunately, the inconvenience of the pandemic has prevented me from doing so. In hopes of a recovery from the COVID-19, future researches are hence encouraged to opt for a qualitative study on the matter.

While investigating on these issues, many gaps have arisen. For example, it could be interesting to study more in depth how much people actually know on different topics of sustainability. In this research, I have taken into consideration only the environment and the people's own health, but many other causes are worth of further investigation and hopefully find out if people are more interested in determined topics instead of just environment and own health. For sure these two are macro arguments and in them we could find many more subcategories, that could for example be the protection of the coral reef in Australia or the safeguard of the redwood forest in the United States. But also, in the health category there could be topics ranging from which diets to follow in order to reduce the use of dairy products or diets that help the person into having a healthy diet and avoid obesity. There are many declinations of these two macro categories that deserve of a proper more detailed study. In addition, it could be valuable to also study the moral licensing related to these topics. Is moral licensing towards environment and personal health linked between each other? Do people consider, for instance, that a protected and healthy environment could have a positive impact on their own health and diet?

Lastly, while analyzing my data, I found out that in case people have the choice to substitute the regular fast food option, on both extremes of the spectrum "Agree-Disagree" people didn't choose the extreme options that are "Strongly agree" and "Strongly disagree". In my research I didn't study the reasons for this behavior. Out of more than 100 people no one chose the extremes, and I believe that further studies should study this behavior to find if is there a hidden behavior that needs to be uncovered.

After finishing my research, not only I admit being more conscious on this topic, but also, I believe there are so many more topics to be discussed. I feel like there's always going to be so much more to talk about, everyday new inventions are being created and we have to keep track of them and consider for future researches. For example, new studies could focus on what would be customer purchase intention and behavior when faced with cultured meat, which is meat created in laboratories but that derives from animal cells, instead of the meat deriving from slaughterhouses. Would people opt for the meat created in laboratories or choose the meat that, even if comes from "sustainable" fishing (E. Cirino, 2020), still has the burden of the animals suffering?

There is still a long way to go to make fast food sustainable, but thanks to requests form customers and the willingness for a change, even if small steps are being made, the future looks bright.

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Appendix

Table on weekly fast food habits

Weekly fast food habits

0	1 or less	2	3	4	5	6	7 or more	Observations
7	51	1	6	4	17	8	13	107
6.5%	47.7%	.9%	5.6%	3.7%	15.9%	7.5%	12.1%	100%

Confirmatory factor analysis for factor 1

	Factor 1- loadings
Acting environmentally friendly is an important part of who I am	.930
I am the type of person who acts environmentally friendly	.942
I see myself as an environmentally friendly person	.906
I make environmentally friendly choices in my everyday life	.911
I have more knowledge about the environment than most people	.790
I consider myself an expert on food knowledge	.564
% of variance explained	**72.38%**

If I were to purchase an environmentally friendly fast food option, I would likely buy a larger size that I would if purchasing a regular fast food option

scores	Strongly disagree	disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	agree	Strongly agree	observations

Non-green	6	4	1	6	5	12	11	45
Green	7	15	13	13	5	9	0	62
total	13	19	14	19	10	21	11	107

Table 4.3

Test correct answers:

1. Where does most of ocean pollution comes from
    1. USA
    2. **Indonesia**
    3. Europe
    4. Brazil

2. What is the most common cause of pollution of streams and rivers?
    1. Dumping of garbage by cities
    2. **Surface water running off yards, city streets, paved lots, and farm fields**
    3. Litter near streams and rivers
    4. Waste dumped by factories

3. Paper straws are
    1. Recyclable but not biodegradable
    2. Biodegradable but not recyclable
    3. Both recyclable and biodegradable
    4. **Neither recyclable nor biodegradable**

4. GMO food:
    1. **Reduces the pesticide use**
    2. Is less safe than organic
    3. Is not adequately tested
    4. Is a breeding method

5. A vegetarian/vegan diet as recommended by the government would:
    1. Decreases water consumption, green house emission, energy consumption
    2. Decrease greenhouse water consumption and gas emission but increase energy consumption
    3. Increase greenhouse emission and water consumption but decrease energy consumption
    4. **Increase water consumption, greenhouse emission and energy consumption**

6. For every 1,000 calories of food, which one of these foods has more impact on the environment?
    1. **Head lettuce**
    2. Pork
    3. Cucumbers

4. Canned fish

7. Compared to a regular meat burger, a meatless burger has:
    1. Lower calories, sodium, fat, and cholesterol
    2. Higher calories, but lower sodium, fat and cholesterol
    3. **Lower calories, fat, and cholesterol but higher sodium**
    4. Higher calories and sodium but lower fat and cholesterol

8. The average amount of sodium in a meat-less burger is
    1. Between 0 to 200 mg
    2. **Between 201 to 400 mg**
    3. Between 401 to 600 mg
    4. Between 601 to 800 mg

9. Scientists agree that organic food…
    1. …is more nutritious than conventional food
    2. …is less impactful on the environment than conventional food
    3. **… is produced in inefficient farms**
    4. …tastes better than conventional food

10. Organic food …
    1. **…use pesticides derived from natural origin elements**
    2. …is pesticide free
    3. …avoids the use of synthetic substances
    4. …is both pesticide free and avoids the use of synthetic substances

Summary LUISS

Over the last few years companies felt the urgency to shift their attention towards an emerging trend: Environmental sustainability. Customers have become more attentive on what they buy and, the business of sustainable products is growing way more than their non-sustainable counterparts, as the study from 2013 to 2018 shows, there has been a growth of 29% for sustainable products compared to the non-green competitors in the category (Kronthal-Sacco & Whelan, 2019). This is one of the reasons why firms have felt the need to advertise their sustainable initiatives on their media, since that would direct the attention and money of various and heterogeneous consumers to their restaurants. Among those who foresee a change in the manufacturing process we find companies like McDonalds, that aims at relevant goals like having fiber-packaging made out of raw material that comes from certified sources where no deforestation occurs (Altmin, 2018), and to source the 100% of their packaging from renewable or recycled sources by the end of 2025 (Altmin, 2018). But we should be careful because this, doesn't necessarily mean that they will substitute anytime soon their original menu to a more environmentally friendly one. This means in other words that, by keeping the current environmentally damaging behavior, they will implement the options by including an eco-friendlier menu. Of course, at the same time, these fast food restaurants are also making substitutions regarding the eating utensils, like replacing the plastic straws with paper ones or by using tissues derived from recycled paper. But are these alternatives actually better for the environment than the original ones?

We should then keep in mind that the competitive advantage of these companies relies on the convenience of the products and its price. The means to achieve this convenience often relies in cheaper raw materials like cow meat, fish, poultry, wheat and grains, to say some, needed in huge amounts, which hence allow such economies of scale leading to cheaper prices. Reaching economies of scales in these restaurants usually involves meat and crops to be produced with intensive farming techniques (Bailey, Froggatt, and Wellesley, 2014) which might contrast with what green consumers are looking for in their food selection which often is biological crops and meat coming from not intensive farming.

Moreover, we should also consider the possibility that these changes have a further marketing purpose: increase their market share. By showcasing their green efforts, these firms will not only be able to reach their regular customer base, but they will also increase it by stealing new customers from companies that are not offering green options. Considering past literature, little to no attention has been given to customer's personal and internal values like motivation, pro-environmental knowledge, awareness and many more (Kollmuss and Agyeman, 2002). So, the focus of my research project will focus on the consumer behavior when faced with the green initiatives and food alternatives from fast-food chains. I will not only study their purchase intention when considering between a regular fast-food item and a green alternative, but I will also find out their knowledge level, comparing the self-perception of knowledge about the environment to their actual

knowledge. Moreover, I will test if the sample taken into consideration is going to manifest moral licensing when faced with a green choice option. Of the many objectives that my research will study, one of the findings that I personally consider more interesting is to reveal how many people of the sample will consider themselves knowledgeable about environmental issues and how many will actually have that expertise on the topic. Also, it is going to be interesting to find out to which of the two categories that we will take into consideration, either non-green consumers or green consumers, they belong to.

Therefore, the research questions I am going to answer through my thesis are the followings: "How fast food's green initiatives, and customers' own perception of knowledge on environmental issues, influence purchase intention of fast-food? Will these green initiatives bring new customers to the companies? Is the moral licensing derived from sustainability issues a cause for a higher demand of meat? And lastly, who are the most knowledgeable on environmental issues between heavy and non-heavy consumers of fast-food?"

2. Literature review

2.1 The value action gap

People have become more aware of environmental issues but as reported by past literature, there is a mismatch between what people would like to do to be more environmentally friendly and what they actually do. This gap is called value-action gap (Olson, 2013).

According to (Kollmuss and Agyeman, 2002) the value action gap on environmental issues is represented by a disparity between the value placed on the natural environment and the level of action taken by individuals to counter environmental problems. The study will take inspiration from Kollmuss and Agyeman's model which at the same time was based on previous studies made by and Ajzen & Fishbein (1980) and Rajecki (1982). This model showcases how the environmental behavior is influenced not only by external factors but also by internal ones like motivation, environmental knowledge, values, attitudes, environmental awareness and more. Moreover, according to another research (Olson 2013), the value-action gap is created also in the moment where a person considers buying a green product and is faced with different tradeoffs. In a survey published in the Harvard Business Review, it is shown the reality of value-action gap in the everyday life, in fact, 65% of the respondents said they wanted to buy purpose-driven brands that advocate sustainability, yet only about 26% actually did so (White, Hardisty & Habib, 2019). Since past researches applied this concept only to strongly green customers, now we are going to apply it to a wider variety of people, not only the more environmentally conscious ones but also the less green consumers which are the heavy fast-food consumers that we discussed earlier. With this in mind, we pave the way to the creation of the first question that is going to be discovered through my research: the presence of a value-action gap between values and beliefs regarding the environment and the purchase intention of fast food. For the sake of my research I assume to find that: the

greener the type of consumer thinks he/she is, the more he/she will trade a regular fast-food option for a greener one. The aim of this study is relevant to firms approaching green causes because I will not only explore if this could be a relevant marketing strategy able to bring more customers, but I will also study to what extent people's own beliefs impacts on it. Also, I will examine if the guilt reduction from the consumption of more sustainably alternative food, encourages an increase in consumption, caused by moral licensing due to the choice of a real or perceived green tradeoff which gives to the consumer a justification of their consumption. This effect of nullifying the positive impact of the green initiative that derives from an increased consumption of the green item is called: rebound effect. Many studies focused on companies going green, but in contrast with them, I want to analyze the current situation starting from the customer's point of view. The problem with the fast food industry unfortunately is that most of the times consumers are not properly educated and sometimes they end up making choices that appear to be eco-friendly without actually being like that. And since most of the times companies use these green claims to induce more people into buying the products, it's important to address this topic because people often choose the green alternative over the regular one, but as we are going to see, green doesn't necessarily mean better for you or the environment, and people are not aware of this. Therefore, my research will methodically approach this debate by proposing a test of ten questions to the sample to verify their actual knowledge on environmental sustainability issues and also how much they are certain of the answer given. I would assume that the people that consider themselves as eco-friendlier than the average, would score high on the certainty of their answer but, the key of my research is to compare if they will also score high to the test inside my research survey.

2.2 The sustainability issue in fast food market

We are at a crossroads, people require organic food, which is produced in inefficient farms, but the inevitable population growth requires also abundant production of meat and crops which rhythms cannot be sustained by an inefficient farming. This cycle is also backed up by these sustainability trends where people, I assume, do not even have the critical spirit to inform themselves and make the right decision for the environment and themselves, which not always is the obvious one as my research will find out. Therefore, we should check if their shopping habits reflect their values and beliefs, or if for example the possibility to upgrade their menu option with a more amount of food for a little price increase, the so-called upsizing, will make them drift away from the original purpose. We also have to study whether they are conscious of the benefits or damages of their lifestyle choices and if they know about of the consequences that some environmentally sustainable actions imply, since there is scarce literature on this matter, during this research I will test whether people that consider themselves knowledgeable on sustainable issues are actually experienced on the topic or not. My assumption is that nowadays, being feed with waves of news about food and environment by a huge amount

of sources, some more reliable than others, the consumer finds himself confused on what to believe and a lack of a critical mind may lead them to trust facts that not always tell the truth.

2.3 Why customers choose green products?

From the Wellesley, Happer and Froggatt (2015) research, it turns out that people underestimate the influence of meat and dairy production on the climate change because they are not aware of the actual negative outcome of that production and indeed, believe that the main problems are deforestation and emissions. In general, we could assume that people are not very well educated on the subject. Therefore, we should ask ourselves, why people act green? Many are the reasons to this behavior, but for sure, past literature is vocal about the effect of culture and egoism on it. As for the first one, it has been found out that the higher the level of education, the more people care about the environment. This phenomenon is confirmed by a study by Pirani and Secondi. According to this study, the majority of people who live in the most developed and rich countries have an inclination to undertake green habits, in fact over 96% of European citizens agree on considering the protection of the environment as a fairly important task (Pirani, Secondi 2011). Furthermore, these people feel that taking care of the environment derives primarily from a sense of moral obligation (Pirani, Secondi 2011). The main aspect to not underestimate is the "moral licensing" effect applied in our case, to fast foods. As I anticipated before, the "egoism" in this is to be intended as the personal gratification derived from a green behavior. More in detail, the theory explains that "moral licensing occurs when past moral behavior makes people more likely to do potentially immoral things without worrying about feeling or appearing immoral" (Monin & Miller, 2001) in other words, people who prospect to perform a positive act in the near future, feel less guilty into behaving contrary to their action in the present time. This effect could be able to explain us, how the sustainable claims could actually push people into choosing to consume a fast food product that claims to have a green outcome. Therefore, this could end up in promoting the adoption of their food and increasing not only the value-action gap we talked about before but also consumption, leading to a rebound effect.

2.4 Paving the way to sustainable changes.

In a time where the majority of products and services are more and more standardized, the firm that is most likely to succeed is the one that offers something different from the others. That is why recently, many companies focused their attention to listen to what customers had to say. This is what Rohit Deshpandé considers a customer centric company (Deshpandé, R. 2014). Since in the last few years, environmental sustainability has become a very discussed topic among customers, companies had to keep the pace with trends. But not only, also, in 2015 we saw the creation of the Paris Agreement where all countries pledged to

the long-term goal of reducing emissions by 2050 (Dimitrov, R. 2016). Both the Paris agreement and the requests from customers soliciting for more eco-friendly processes, were the triggers that pushed companies into taking action and promising changes in the long-term. Fast food chains were fast into implementing this. These companies launched campaigns with claims about reduction in plastic usage, renewable packaging and so on. For example, this year the fast-food chain KFC announced they intend to substitute the chicken nuggets meat with a laboratory made meat that supposedly will have a very close taste and resemblance to the original meat. This collaboration with 3D Bioprinting Solutions is publicized in the KFC website as a "more environmentally friendly" option with its first testing planned for this fall in Moscow (KFC, 2020).
But also, the main McDonald's competitor, Burger King, is not lagging behind. by proposing an alternative to their Whopper: The Impossible Whopper. Even thought, since its release in August 2019, the burger faced criticism from vegans. If from one side firms are shifting to an environmentally sustainable alternative to their current processes, on the other side these companies seem still not prepared to serve the segment of customers these products mainly aim for.

2.5 The main problem with fast food's "green" manufacturing.

As it was briefly introduced before, the reason why these companies decided to shift to a more sustainable future is to keep the customers loyal, possibly increase market share and adhere to the Agreement's directives. But these types of firms basically rely on the availability of enormous quantities of meat.
The aim of the following research is to find out not only if current fast-food consumers could be actually interested in trying and switching to a green fast-food menu option. But also, which are the values and practices that would push new consumers' segments to approach the fast foods. I am therefore going to research whether the implementation of a fast food item focusing either on environment or people's health and diet could move them to purchase from fast food chains that sell products with either one or the other. Then, because of moral licensing they could be spurred into becoming themselves new fast food's clients. We saw in the past how this created much agitation in the past. When introducing a new process into a well-established one, it is important to cure every detail. The lack of this led to a lively court discussion in 2019 between Burger King and an unsatisfied customer. The lesson we can retrieve from this episode is that it will take time to these fast-food chains to adapt to the requests of these new categories of customers. Is this sprint towards acquiring more market enough to justify the expenses needed to answer to their requests?
Lastly, the study will find out how an increase in consumption, due to more consumers eating fast food could generate another problem: the rebound effect.

This effect is a consequence of moral licensing. In fact, a higher request of meatless burgers made out of vegetables, sponsored by the now guilt-free meat movement, could have a worse effect on the environment (A. Tugend, 2019). This negative effect could overcome, according to a study conducted in 2014, the positive ones prompted from the green initiatives (Bailey, Froggatt, and Wellesley, 2014).

2.6 The main problem with human behavior

People are biased and irrational. According to a research on the irrationality of people (I. Brocas, J. D. Carrillo, 2003) people can have that kind of behavior when, in the case of looking for pleasure, they end up harming themselves. We can observe this in the fast food market. People are looking for treats and easy meals but they're trading that off with health and a brighter future for the environment. In this research I would like to find out how much this tradeoff translates into wanting to purchase fast food and saving the environment. The introduction of greener options on the menu, I assume, is going to help cooperate with that and hopefully I will find significant results from my analysis of both the purchase intention analysis of green items and not, and the guilt relief from the moral license effect due to that purchase.

At the same time, people are also bounded in their knowledge. Bounded rationality, as described by Herbert A. Simon in 1996, is: "The meaning of rationality in situations where the complexity of the environment is immensely greater than the computational powers of the adaptive system.". If we apply this theory to the fast food industry and sustainability issues, we could assume that people, given the huge amount of different and various information on environment, are not capable of learning all that is to know about sustainability. This might translate in my research into having green people that believe they have higher knowledge on the topics, compared to the average, but in reality, their actual knowledge might be average or below. This could mean that people have consequently a knowledge gap on sustainability issues that were not aware to have. And lastly, because of bias like the confirmation bias, we could find that people that had prior knowledge on sustainable issues, like the green category of people, could end up being certain of their correctness on sustainable matters that in reality, are incorrect.

3. Methodology

This research is part of a study aimed to uncover and describe the possible existence of changed behaviors of consumers due to the introduction of sustainable initiatives, but also to find out if these have an impact on their usual consumption pattern caused by the relief of guilt through moral licensing. The survey proposed here is a quantitative study with an inductive approach. Then, I will be able to generalize the sample findings to the whole population to hopefully find interesting discoveries on my topic. My research is based on a series

of questions and a multiple-choice test where only one of the four answers was the correct one. The questionnaire can be divided into four blocks, the first block asks questions related to their own perception of how sustainably conscious they are, it is made of six questions measured with a 7-point Likert scale ranging from "Strongly disagree" to "Strongly agree". In this first part I looked for items that would measure the respondent's own perception of how sustainable he is intended to act. Then, we are going to compare the average results of the first block with the results of the test to see if people that consider themselves more knowledgeable than the average will answer correctly to most of the multiple questions on the test.

The second block consists of a test made of ten multiple choice questions. The questions located in the appendix, are inspired by a previous study on sustainability knowledge called "ASK" which stands for Assessment of Sustainability Knowledge. This previous study conducted by A. Zwickle and K. Jones in 2018 will help us to test the effective knowledge that our respondents have on sustainability issues. The past research filed a list of twelve elements, and I found some relevant questions to insert in my thesis among those. Some other questions in my thesis derive from other scientific papers regarding the topic that can be found in the references.

To study my assumption, my professor and I decided to collect qualitative data through a series of interviews from specific people, which belonged to both the categories of heavy users of fast-food and people that considered themselves as very close to the environmental causes, which I intended to call them: the heavy green-food users. Unfortunately, due to the pandemic I was unable to collect this type of data since that required to find these people in the physical stores and interview them in person. For this reason, I proceeded with quantitative data and wrote a survey.

Since I still needed to classify my respondents according to their actual knowledge, I proceeded to ask questions that supposedly had the aim to uncover the true knowledge they have on environmental causes. Hypothetically, the respondents that consider themselves as very knowledgeable on sustainability, should score high both on their own perception of sustainable knowledge but also on the test too, but this would mean that people would have a perfect perception of themselves which is not true in reality, people are dominated by different bias. Moreover, I tested also the certainty of people for the answer given on a 5-point Likert scale. My research will then try to find out what happens in the real world and what is people's actual knowledge of sustainable behaviors and if they are certain of the answer given.

Then, in the third block of my survey, I asked questions related to respondents' actual daily tasks to see if those actions would match with the answers given at the beginning of the survey or if the answers confirm the presence of a value-action gap among the respondents' behaviors. It is here where I will actually confirm or dismiss the presence of a value-action gap between the values and beliefs of people and their actual actions. The fourth block consisted of demographic questions like age, sex, income and occupation to better understand

the population sample and to see what the trends of the population are. We could find out for example if the value-action gap is more evident for people with low income or with lower education or if they're still students. According to the theories examined before in the literature review, my thesis will investigate:

- The presence of a value-action gap between values and beliefs regarding the environment and the purchase intention of fast food;
- The level of self-perceived knowledge of sustainable issues and actual knowledge;
- What is the effect of these initiatives for the environment and people's health and diet on both categories of consumers, the fast-food daily users and those that predilect a green lifestyle;
- The effect of moral licensing on the guilt of the two classes of consumers due to the purchase intention of sustainable fast food;
- If we find a causal effect from moral licensing to increase in consumption.

Hopefully this research will give us enough insight and to find relevant information as to generalize the findings to a bigger population.

I presented the survey to a convenience sample because of the limited possibilities due to COVID-19 pandemic. The population was comprised of 47.7% belonging to the male population and a 52.3% of females. Among them, the majority of respondents belong to the age range 19 – 25 and 26 – 35, hence we can say that the respondents were fore the majority young people, the 93.5% of people belong to the age range 19 – 35. These people were either students (69.2%) or full-time workers (26.2%). This is highly possible to the fact that I took a convenience sample and shared the survey among my university colleagues and also in my working environment. The level of education spans among the three categories of "high school", "bachelor's degree" and "master's degree" even if the majority of respondents are highly educated having achieved a master's degree level of education. The education percentages are respectively 9.3%, 36.4% and 51.4%.

Among all the respondents we can already start to see the fast food tendencies that we are going to further analyze in my research. But at the moment, we could start by looking at the consumption frequencies of fast food. From the table in the appendix "Weekly fast food habits" we can see two main trends, the first one where the respondents apparently consume fast food products mostly once a week or less, which means that they might consume less than once a week but still they consume fast food products some time during the month. The other side of the spectrum sees more dispersed habits but still the 35.5% of people answered that they consume fast food between 5 to 7 or more times a week, which is a very relevant data for us because this means that, even if I gathered a convenience sample, I still have a very heterogeneous sample population.

Now to my assumptions, I expect sustainable initiatives to truly have a weak effect for heavy fast food consumers, this is because according to a research by National Geographic (2014) "many consumers, especially those who eat meat more regularly than others, do not think that meat consumption is environmentally detrimental" hence I expect my first assumption to be confirmed by the future data collected.

For the second assumption it is important to consider the awareness gap of green food consumers. In fact, what is missing is complete education on the impact of sustainable initiatives on the environment, since surprisingly, some vegetables have a higher impact on the environment than some types of meat like pork and chicken (Bailey, Froggatt, and Wellesley, 2014). This is important to take into consideration because, in case fast food chains would offer a sustainable product that isn't seen as purely following the well-known and practiced habit of shifting from plastic to paper, then customers might cater their attention to a product that might seem more eco-friendly but that in reality, by doing some research, it could turn out to be more harmful for the environment. I will then expect more informed people to actually investigate and then trust the green initiatives of fast food companies and possibly to try out the products of a company that is pushing to a greener transaction. This, if supposedly correctly achieved with the best intentions from the restaurants, could bring to a segment of people that wasn't firstly attracted to that type of catering, but that now in reality could be interested in the matter.

As for the third assumption, according to previously cited theories, I am expecting a positive effect of moral license on purchase intention. The relief of guilt we assume, will spur people into consuming more of the green alternative item deriving from the positive feeling people experience towards themselves and the environment.

4. Data analysis

Of the multitude of responses, I was able to gather 107 valid responses, among which, I have more than 30 respondents for each category that I will examine, making it possible to analyze the data with a standardized normal model. The responses were then further analyzed through the software SPSS. As first approach to our data, it was important for us to do some data cleaning, removing all the inconsistent answers and also the incomplete ones. Afterwards, I carried a reliability analysis on the Likert scale for respondents' own perception of knowledge on environmental sustainability to test whether I had internal consistency for the items used. According to a study of K. S. Taber, a result is considered acceptably good if the Cronbach's α is superior to around .70. Our results show an $\alpha = .920$ hence my results are to be considered reliable.

Then, I proceeded to carry out a confirmatory factor analysis with the oblique rotation called Varimax to reduce the items into fewer factors, the aim of this confirmatory analysis is to find out if the Likert items I used for the own perception of respondents' on knowledge can be summed up into one single factor. The KMO test of sample adequacy has a value of .880 so this means that we have a fair good adequate sample, moreover the Bartlett's test of sphericity $\chi^2(15) = 580.243$, $p < .000$ indicates that our correlation matrix is adequate for a factor analysis, hence we followed with the confirmatory factor analysis. From it, the results show, as expected, the presence of one main factor. Factor 1 is comprised of six items reported on a 7-point Likert scale, it explains 72.380% of the variance with factor loadings ranging from .564 to .942. I proceeded to call this

factor “Own perception of knowledge on sustainability”. Therefore, this factor, extracted with the eigenvalue criterion, explains a total of 72.380% of variance which is sufficient for the purpose of my research. Moreover, after having created the new factor, I proceeded into creating a dummy variable where the value “0” is associated with non-green consumers and the value “1” is associated with green consumers. It’s in fact these two categories that we will take into consideration during my research. Out of a total of 107 respondents I found out that a total of 45 people belongs to the non-green category while the remaining 62 respondents belong to the green consumers category.

4.1 Studies on value-action and knowledge gap.

As previously explained, my research will focus firstly on finding out if there is a value-action gap between values and beliefs of people and their intention to buy fast food. To do so, I will compare the own perception items with the purchase intention to buy fast food in the future. At the same time, I will distinguish between green and non-green consumers to find out what are the differences in behavior when purchasing fast food. I will compare then the scores of the own perception of their values and beliefs among green and non-green consumers and see if their intention to buy is high or low. To distinguish among green and non-green consumers I will take into consideration the Factor 1 we found out through the Factor Analysis. Given the theory, I would expect the green consumers to have lower scores for purchase intention of fast food.

By observing our data, we can see how in our population, between non-green consumers ($M = 5.07$) and green ($M = 4.3$) we would expect the non-green consumers to most likely purchase fast food in the future. But as we see the differences between the groups are still very small and possibly, we would not find that much of a difference in behavior between the two groups. To give a more scientific outline and confirm my results, I proceeded with executing an unpaired t-test [$t(105) = -1.960, p = .053$] between the two types of consumers and the purchase intention. What I found by comparing the two groups’ means is that, given our results, the two groups act in a very similar way, hence, as correctly predicted, there is no statistically significant difference between these two groups: green and non-green in their purchase intention behavior and they are most likely to buy fast food in the near future.

Moving on with our second assumption, I want to find out which of the two categories of people has better knowledge on sustainable matters. We might assume that green customers have higher knowledge on sustainability issues, but, after having compared the two groups I have found that, when faced with the test in my survey, both categories answered very similarly, finding no statistically significant difference among the two groups. The only difference could be seen for two questions, Q.1 and Q.4 where the majority of green people answered correctly, contrary to the non-green people. At the same time, we could examine how certain

are the respondents of the correctness of their answers. Are people sure of what they are saying is correct? With the help of a t-test to compare green and non-green customers, I found out that all the respondents were on average nor certain or uncertain ($M_g = 3{,}9;\ M_{ng} = 3{,}8$) of the answer given. This means, that from my survey we can say: green and non-green have on average the same level of certainty, or shall we say, same level of a "somewhat certain" answer.

4.2 Studies on purchase intention behavior.

For what concerns our third element to investigate, we will now look at the attractiveness of these sustainable initiatives for both categories of consumers, the green and non-green customers. To do so we shall take in consideration the purchase intention of green and non-green respondents when confronted with the question of whether they feel enticed to switch from a regular fast food option to the green choice and then comparing this result to the regular purchase intention variable. By doing a t-test [$t(90.586) = 5.024; p = .000$], we can see how for the two categories green ($M = 5.24; SD = 1.314$) and non-green ($M = 3.89; SD = 1.418$) there is a statistically significant difference in purchase behavior. This means that green respondents are more likely to switch to a green alternative rather than the non-green respondents. Moreover, if we look at the purchase intention of green fast food in the near future, we can confirm the different purchasing behaviors of green and non-green. In fact, there is a statistically significant difference [$t(105) = 2.533; p = .013$] between the means of the two groups green ($M = 5.15$) and non-green ($M = 4.36$). We can conclude that green and non-green have different behavior when it comes to purchasing green alternatives of regular fast food items, if green consumers are more likely to accept the sustainable introduction, we can't say the same for non-green consumers.

4.3 Studies on guilt relief and purchase behavior.

It is interesting to study also what happens when fast food companies propose to consumers products that are aimed towards the protection of the environment or also towards products that are better for the people's health or diet. Which one should be the most profitable for companies to focus on?
To study this, I launched a t-test for both initiatives and found out the following results. Both green ($M = 4.81; SD = 1.469$) and non-green ($M = 4.60; SD = 1.615$) are likely to buy a sustainable initiative because it makes them less guilty towards the environment, but also people feel less guilty towards their own health and diet, in fact green ($M = 4.74; SD = 1.514$) and non-green ($M = 4.87; SD = 1.517$) have similar means on guilt relief. And by using a pairwise test I confirmed that people don't find any difference when they're

buying a green alternative that releases the guilt towards the environment or their own health. This tells us that fast food companies could direct their marketing efforts both to products that relieve guilt towards the environment or to products that have beneficial effects on health and diet, and which hence relieve guilt towards those. People would buy those products because in both cases they have a guilt release but, if we see at the purchase intention of green fast food studied before, we can suggest that companies should direct these products towards green consumers because they're more likely to buy them, instead of the non-green consumer.

4.4 Study on moral license and increase in consumption.

- The effect of moral licensing on the guilt of the two classes of consumers due to the purchase intention of sustainable fast food;
- If we find a causal effect from moral licensing to rebound effect.

The previous study brings us to another research question, connected to the prior: is there any effect of moral licensing? In particular, do we find an increase in consumption caused by the relief of guilt?
For my last study we are then going to analyze my last assumption which is looking for an increase in consumption of the green item given the diminished guilt deriving from the fact that, being the item less detrimental for the environment or themselves then people feel like they can afford to consume more of it.
We are therefore analyzing the last question of our survey: "If I were to purchase an environmentally friendly fast food option, I would likely buy a larger size that I would if purchasing a regular fast food option" and explore the results. I expect then to find a higher percentage of people that would agree with the affirmation.
From the table 4.3 in the appendix we can see how the percentage of the general trend of people is to disagree with the statement, which means that in general, people (43%) would not increase the size of green food ordered compared to the regular one. But this percentage is not very significant since we have a 39.25% of people that would on the contrary increase the size of the fast food option, and also, a 17.75% are either indifferent or still have to choose whether increase or not the food size. Therefore, another deeper analysis is desired. If we look at the differences among category of consumers, we have a totally different scenario. If we consider the non-green part of the sample, we can see how a huge part (62.22%) of people would increase the amount of food, while just the 24.44% would keep the size of the green food choice, the same as the regular one. This shows that the rebound effect for non-green consumers is quite strong. Moving on to the green consumers, the results show how the results are quite the opposite. In fact, the 56.45% of respondents belonging to that category would not increase the amount of food consumed. And also, like in the other case, the 22.58% of the opposite spectrum would agree on increasing the size of their green alternative. This

behavior is quite interesting to observe, for the non-green respondents we see how the around 60% of them would likely buy a larger option, while for the green respondents is totally the opposite as around the 60% would choose not to increase the size. This is the reason why when observing the general trend, we had very equal results, because both categories have opposite behaviors. To conclude, we do find a rebound effect for non-green consumers, but we do not find a rebound effect for green customers. The reasons for this behavior could be further explored in future researches. But, as far as we can assume with the data we gathered, we could say that, being the product considered less harmful for environment and health, people, in particular non-green ones, feel they are allowed to consume more given the fact that they feel less guilty of causing damage.

5. Discussion

Given the latest trends on the market, I wanted to focus on one in specific: sustainability initiatives. In particular, I wanted to focus on the initiatives coming from fast food chains, considered by many the most popular cause of pollution. This topic has been largely studied already, but with the passing of time, it feels like there are always new interesting topics arising that need further analyses. I hence decided to take from past studies some subjects that needed to be studied from a different perspective. Many researches, like the majority that I took into consideration to write this research, focus on studying the so-called green consumer. But I wanted to study also the behavior of the other side of the spectrum, the non-green consumer. My respondents therefore range from the people that can be considered as green and don't eat fast food at all, to the people that are avid fast food consumers. This research is aimed to both fast food companies that are interested into finding out what are the main behaviors of the market population, but also for the people that are interested in the topic and want to know more about this. First of all, I wanted to find out about the existence of a value-action gap. In my case I studied how the values and beliefs of people towards the environment affected the purchase intention. The goal was to find a value action gap for the green consumers and the results positively confirm that. By firstly asking a series of question about their own perception of how green they consider themselves, and then a question about their intention to buy fast food I reached the conclusion that the majority of people, both green and non-green will still consider buying fast food in the future.

At the same time, the second issue my thesis covered, was to find out the level of knowledge on sustainability. I found out that not many past researches studied this subject, and the ones who did, like the "ASK" research I took inspiration from, only considered green people. I therefore decided to take this into my own hands and, after having requested the permission from the authors of the ASK research I proceeded into creating my own having that one as inspiration and modelling that to make it more relevant for the fast food topic. I wanted to test whether the level of self-perceived knowledge would match the actual knowledge, the results from this test showed on the contrary that people are not well informed and neither certain of the correctness of what

they know on sustainability topics. But not only, as if this was not worrying enough, from the data gathered I noticed how people who answered the test, were more certain of the correctness of the wrong answer than of the correct one.

Moving on from the point of view of the customers and their likelihood of not being knowledgeable enough to make the best choice for the environment and themselves too, causing a value-action gap, we now can shift to what happens to the customers behavior when purchasing. In my research, I focused on the purchasing behavior before and after the introduction of the sustainable initiative. I discovered that, given the majority of people would purchase fast food in the near future, when faced with a green option, the non-green category of people is not likely to substitute the regular to the green option, while for the great majority of green people there is a will to do the change. Moreover, I also found out that the green category is also more likely to buy green fast food in the near future.

In addition, I studied also whether which kind of green initiatives a fast food should opt for, depending to which product people would feel a relief of guilt and hence consume more. Should the company opt for a product focused on releasing guilt towards the environment or towards the diet and health of its customers? Well, from my study we see how this doesn't make that much of a difference because people feel less guilty of purchasing fast food whether they're purchasing something that reliefs guilt to both the environment or themselves.

On a negative note on the other side, we find that if people consume the "green" option, they feel a reduced sense of guilt that pushed them to consume more quantity of the item. This event is likely to nullify the "sustainability efforts" of the green products and therefore this could mean on the long run a worse outcome for both the environment and for people themselves since a higher consumption of fast food could worsen their health.

To conclude, I consider my research relevant not only for companies, but also for people interested in the topic. First, for companies is relevant because it's a further study on the consumer and its behaviors. Moreover, given the trend on sustainability that we could observe lately, it's important to see what the best marketing choices are according to customers' preferences, so to avoid unnecessary expenses on products that would not be appreciated by the market. On the other side, for people interested in sustainability and sustainable initiatives, it's important to increase their awareness and critical mind to hopefully make them understand that the majority of people is not well informed on the topic.

6. Limitations & Future researches

During my research I have met some limitations, for example regarding the sample. The majority of people would belong to the age range of 19-35 years; hence, it would be relevant to look for a more heterogeneous sample. Moreover, a qualitative survey to support this and future studies would be a nice addition.

Unfortunately, the inconvenience of the pandemic has prevented me from doing so. In hopes of a recovery from the COVID-19, future researches are hence encouraged to opt for a qualitative study on the matter.

While investigating on these issues, many gaps have arisen. For example, it could be interesting to study more in depth how much people actually know on different topics of sustainability. In this research, I have taken into consideration only the environment and the people's own health, but many other causes are worth of further investigation and hopefully find out if people are more interested in determined topics instead of just environment and own health. For sure these two are macro arguments and in them we could find many more subcategories, that could for example be the protection of the coral reef in Australia or the safeguard of the redwood forest in the United States. But also, in the health category there could be topics ranging from which diets to follow in order to reduce the use of dairy products or diets that help the person into having a healthy diet and avoid obesity. There are many declinations of these two macro categories that deserve of a proper more detailed study. In addition, it could be valuable to also study the moral licensing related to these topics. Is moral licensing towards environment and personal health linked between each other? Do people consider, for instance, that a protected and healthy environment could have a positive impact on their own health and diet?

Lastly, while analyzing my data, I found out that in case people have the choice to substitute the regular fast food option, on both extremes of the spectrum "Agree-Disagree" people didn't choose the extreme options that are "Strongly agree" and "Strongly disagree". In my research I didn't study the reasons for this behavior. Out of more than 100 people no one chose the extremes, and I believe that further studies should study this behavior to find if is there a hidden behavior that needs to be uncovered.

After finishing my research, not only I admit being more conscious on this topic, but also, I believe there are so many more topics to be discussed. I feel like there's always going to be so much more to talk about, everyday new inventions are being created and we have to keep track of them and consider for future researches. For example, new studies could focus on what would be customer purchase intention and behavior when faced with cultured meat, which is meat created in laboratories but that derives from animal cells, instead of the meat deriving from slaughterhouses. Would people opt for the meat created in laboratories or choose the meat that, even if comes from "sustainable" fishing (E. Cirino, 2020), still has the burden of the animals suffering?

There is still a long way to go to make fast food sustainable, but thanks to requests form customers and the willingness for a change, even if small steps are being made, the future looks bright.