Impact of environmental-friendly business practices on consumer behavior, of various age groups in Ireland.

Ritum Sah

Dissertation submitted in partial fulfilment of the requirements for the degree of [Master of Business Administration (MBA)] at Dublin Business School

Supervisor: **Dr. Andrew Browne**

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2. Declaration

I, Ritum Sah, do hereby declare that the dissertation entitled, **"Impact of environmental-friendly business practices on consumer behavior, of various age groups in Ireland."**

has been undertaken by me for the award of **Maters of business administration (MBA)**. I have completed this study under the guidance of **Dr. Andrew Browne, Lecturer - Arts, Languages and Study Abroad Programs, Dublin Business School, Dublin**

I also declare that this study is the result of my own investigations except where otherwise stated, where it is clearly acknowledged by references. Furthermore, this work has not been submitted for any degree, diploma associateship or fellowship or any other title in this university or any other university.

Name: Ritum Sah

Student No.- 10537455

Place- Dublin, Ireland

3. Acknowledgements

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4. Abstract

The research found that environmental beliefs and deontology have a positive relationship with inward and outward environmental attitude. It was also found that inward environmental attitude was a positive predictor of green purchasing behavior (GPB), but outward environmental attitude was found to be insignificant when it comes to general environmental behavior. The research also suggests that men are more likely to engage in green purchasing behavior, but women's green purchasing behavior is more strongly influenced by inward environmental attitude. Similarly, millennials are more likely to engage in green purchasing behavior, but boomer's green purchasing behavior is more strongly influenced by inward environmental attitude. The findings of the research are in accordance with majority of scientific literature available on this topic. The research has provided solid constructs for future researchers to benefit from and improve as the coefficient of determination (the proportion of the variance in the dependent variables that is predictable from the independent variables) of the constructs are above 0.7 which translates to more than 70%. This offers a lot of certainty in predicting the behavior of consumers.

5. Introduction

Consumers make purchases every day and their purchases are governed by a lot of variables, including both, (Alfred, 2013), and the less popular ones, one of which is environmental considerations. T (Alfred, 2013; Brunner & Siegrist, 2011). Thereby, there is incentive in producing

Researchers have noted that environmental concerns, along with buying behavior, is an opportunity for the consumers to show that they "put their money where their mouth is", such that they have the opportunity to shows that the concerns they have about the environment translates into careful environmentally-friendly consumption of goods and services. This prolonged idea of making consumption decisions (Moser, 2016). It should be noted that the environmental concerns in business is a relatively new topic for business organization (ElTayeb, et al., 2010) and it has

popularity of Greta Thunberg. Earlier, organizations were not keen on exploring (ElTayeb, et al., 2010), but now companies are enforcing legislations upon themselves to ensure that their business practices do not have adverse effects on the environment. For instance, The Bank of America asks its suppliers about their environmental footprint. AT&T wants to shift majority to its supply from companies which track and efficiently manage their own greenhouse gas emissions. These are just a few of the many examples of companies which are doing all they can to reduce their greenhouse gas emissions and then there are definitely companies like Tesla, which is pioneering electric cars and solar power, in an attempt to curb down the consumption of fossil fuels all over the world (Wee, 2015).

Whether the scientific literature on the consequence of greenhouse emissions is clear or not is beyond the scope of this research. The question is, (Moser, 2015), thereby supporting the organizations which are making an active adjustment in their business activities and trying to make

the products that environmental-friendly. But is it truly the case? If the consumers are posturing such that they show concern for the environment and their purchasing behavior reflects that concern, that they are purchasing goods and services with negligible or relatively lowest environmental impact, it would be a symbol for rational behavior which is guided by an interest in world sustainability, which would be interesting, because it shows that consumers are able to conceptualize the long-term impact of their consumption patterns and are altering their behavior consequently. On the other hand, if the consumers are posturing a care for the climate, but their purchase behavior is not reflective of such ideology, it would be a symbol of hypocrisy, which would also be interesting.

This question is in line with the view of researchers who suggest that those who do not yet concern themselves with the environmental impact of their consumption can be made to care by informing them of the many climate problems that have befallen mankind (Schwepker Jr & Cornwell, 1991). The faith that academic researchers have in the rationality of the human population despite the lessons in history is astounding. There is an obesity epidemic underway because of the shift in the dietary preferences of consumers and scientific literature has confirmed the casual relationship between the diet and obesity (Popkin, 2001). The scientific literature has also confirmed the consequences of obesity, including but not limited to Type 2 diabetes, cardiovascular issues and some types of cancers (Hossain, et al., 2007). Even though the literature is clear, with absolutely no ambiguity in the findings and no difference of opinion between the academic community, obesity rates are rising, nevertheless. R (Mastrocola, et al., 2019). This is not something that can be qualified as a rational response from the population, because the rational response would be a halt in obesity growth rates. Nevertheless, researchers are still hopeful about

the capability of concern in humans about the long-term effects of their consumption on the only planet they reside (Schwepker Jr & Cornwell, 1991).

The idea that change in the consumption pattern of consumers will be influenced by the change in the activities of the business organization, for the betterment of the environment, is interesting. It suggests that the consumers will be offered a choice to consume a relatively environmental-friendly product and the change in their behavior will dictate what they think about the idea. In a market, consumers have an array of products to choose from, but since this study(2008) but the research they conducted was limited to the US and the same results will not necessarily be reproduced in Ireland. Therefore, there is plenty of incentive and advantage to administer the same methodology in Ireland and understand the consumer preferences of the Irish population.

6. Literature Review

The following text offers a collection of journal article, authentic reports and credible online sources to gather an understanding on the topic in an attempt to understand the variables in question and the relationship between the variables as presented by the scientific community.

6.1 Introduction

A model has been proposed by Kilbourne & Pickett (2008) which separates the values, beliefs, concerns and the behavior of consumers. The researchers indicate that the environmental beliefs that the consumers hold are impacted by the values that the consumers hold dear. Kilbourne & Pickett (2008) further indicate that the beliefs of the consumers impact the environmental concern of the consumers, which in turn, govern the direct and indirect behavior exhibited by the consumers. The research found, proved among other hypothesis, that when the consumers are made aware of the impact that their consumption pattern has on the environment, they experience a sense of cognitive dissonance. In an attempt to preserve their self-image, they must resolve that sense. The researchers further suggest that consumers do not like to associate themselves with the group of people who do not care about the detrimental impact that their consumption patterns have on environment. The idea is interesting and the implication of such is that the people should be made aware of the impact of their individual and collective consumption on the environment, if they are to be convinced to shift consumption towards the purchase of green goods and services.

The research also confirmed the relationship between the beliefs that consumers have about the environment and the environmental concerns (Kilbourne & Pickett, 2008). It should be self-evident that the beliefs will impact the concerns and the scientific literature has more support for this relationship as cited in Kilbourne & Pickett (2008). Alwitt & Pitts (1996), however, did not find any evidence to support the statement that concerns of the consumers about the environmental

consequences of their consumption pattern will translate into their purchasing behavior, which is unfortunate. This difference in finding indicates that the consumers are not consistent about translating their concerns into action, but that is a rudimentary analysis. Notice that the research that found no evidence of a relationship was conducted in 1996 and the research that found evidence of a positive relationship was conducted in 2008. A conclusion that can be drawn from this behavior is that the customers have become more active over time, such that their concerns for the environment are now translating into action. However, that is seemingly not an entirely true solution, especially when the concerns about the environment have been prevalent since the 1970 (Chan & Lau, 2002).

This lack of consensus in the objective analysis presented by different researchers is a cause for consumers and it suggests that there is a need to clarify the position in the scientific literature so that future researchers and practitioners have more evidences to understand the topic, especially with regards to Ireland, and implement effective policies so as to have a profound impact on the purchasing behavior of customers, respectively.

6.2 Theories, Variables and Area of Interests

The theory dictates that there is a relationship between the beliefs and concerns about the environment and that there is a relationship between the environmental concerns and purchase behavior. This relationship is hypothesized for the consumers and several researchers have proved evidence both for and against this premise. Through this research, it has been determined that whether the hypothesized relationship exists in Ireland and what are the differences in the various groups of people in Ireland with the correlations between these variables.

6.2.1 Environmental attitude

Kilbourne & Pickett (2008) have divided the variable of environmental beliefs into two sub-variables, i.e. inward environmental attitudes and outward environmental attitudes. The devil is in the details when it comes to the difference between inward and outward attitudes related to the environment. The abuse of environment as a result of the action of one individual is the inward environmental attitude of that individual. Whereas, the necessity for social, legal and political change to drive the change as a society is referred to as outward environmental attitude (Turkyilmaz, et al., 2015). As is present in the literature, the difference between the perception of individual and collective action is primarily the difference between inward and outward attitude towards the environment.

6.2.2 General environmental behavior.

The researcher suggests that there are a number of factors which impact the behavior of consumers and influences their attitudes including, but not limited to, locus of control, gender, collectivism and political attitude. Stern (2000) presented the idea that the relationship between attitude and behavior is too complex to be considered as unidimensional and therefore a univariate analysis will fall short of providing a complete picture of the factors at play when determining the relationship between variables as presented prior. This is the reason why there are two variables measuring consumer behavior in this research. General Environment Behavior deals with the behavior of the consumers with regards to their affiliations, their contributions towards greener planet, whether verbal, physical or monetary. Whereas, Green Purchasing Behavior concerns itself with the purchase of goods and services which are environmental-friendly. Though Kilbourne & Pickett (2008) refer to these types of behaviors as direct and indirect behaviors, because surely the green purchasing behavior directly impacts the consumption of green goods and services, whereas

contributions to environmental organizations and discussing matters related to the environment with the local government, i.e. general environment behavior, is something that is going to impact the consumption of green goods and services indirectly. But other researchers have used the terms "General Environment Behavior" and "Green Purchasing Behavior" (Leonidou, et al., 2010) and Kilbourne & Pickett (2008) do occasionally use the terms interchangeably, which is why this research will be using these.

6.2.3 Deontology.

Deontology is a school of thought, or an ethical framework, which dictates that the justification for whether an action is right or wrong is not based on the consequence of the action, rather the action itself (Goodpaster, 1983). It is hypothesized that the more an individual pertains to the idea of deontological ethical framework, the more he or she will be positive about the inward and outward environment attitude (Leonidou, et al., 2010). This is because a deontological individual concern himself/herself with the ethical considerations before engaging in any form of activity and determine whether or not the activity is in violation of their duties or obligations. Moreover, it is not only the case that the individual is inherently careful about the governing rules, rather it is that the individual is willing to learn about additional rules which he or she was not yet aware of. This tends of make individuals more mature and it is sure to make them more responsible towards the environment, thereby, impacting the attitude of these individuals. Though there are researchers who question the link between deontology and environmental attitudes (Norton, 1982), but the overwhelming conclusion is there that there is a relationship between the two variables, it is reasonable to include deontology as an independent variable in this study.

6.2.4 Environmental beliefs.

Past researches point out there is an increasing awareness about the environmental changes that have surrounded the human race (Gadenne, et al., 2011). It can be speculated that this can be partly accredited to the efforts of the teenage Swedish environmental activist Greta Thunberg, but it is an objective truth regardless, that there is an increase in beliefs about the environmental catastrophe. Gadenne et. al. (2011) has also suggested that there exists a relationship between the knowledge about the environmental issues and the behavior of consumers. Though this does not entirely match with the views of Kilbourne & Pickett (2008), they suggest that it is the belief about the environmental issues which influences the purchase decisions of the consumers. Nevertheless, it has been agreed upon that environmental beliefs do have an influence, be it direct or indirect, on the green purchasing behavior of the consumers, which is why this variable is a part of the study.

These beliefs can be defined as the perceived relationship between humans and environment in the mind of an individual. Though the literature also suggests that the beliefs can include an environmental problem as basic as the existence of global warming, climate change, depletion of the ozone layer and the shortage of water (Stern, 2000). The idea is to determine whether or the not the people "believe" these problems to be problems. Stern (2000) also pointed out to the idea that there was a difference between intention to do and action, because it might be the case that the consumer wants to purchase a diesel car, but then choses an electric car, because of the seeming advantages of the electric car for the environment. Therefore, the theory of deviant behavior arises in which there are several factors that will become the reason for the differences between the intentions and the actions. It is tough to talk about beliefs and not discuss religion. A research discussed that; the religious affiliations have a significant impact on the perception of environmental issues (Guth, et al., 1995). The paper further hinted at the idea that perhaps the

reason why environment issues are taken less seriously than they should be, is because the religious institutions have not been brought on board with the action against climate change. Though this research found that there was a relationship between the religion and environmental beliefs, but other researchers found no evidence to support the statement that there is any relationship between religious beliefs and green purchasing behavior (Schultz, et al., 2000), which is why this is a not include as a variable in this research.

6.2.5 Green purchasing behavior.

There is consensus on the idea that purchasing behavior of the consumer is going to impact the environment directly or indirectly (Gadenne, et al., 2011). For instance, in the case of a vehicle, the decision to use petrol or electricity impacts the behavior directly, whereas, in the case of food, the decision of whether or not to use organic foods influences the production methods and can only impact the ecology indirectly. Researchers also suggest that the green behavior of consumers is not only limited to the goods and services they purchase, rather it also involves the recycling they do and the energy they conserve (Barr, et al., 2005). Literature also suggests that the more an individual was knowledgeable about the individual responsibility towards the environment, the more likely it is that the individual will adopt green energy practices (Gadenne, et al., 2011). There is an inconsistency here. Gadenne et al (2011) suggests that there is a direct relationship between the knowledge of environment and the behavior of the consumers. Their research found evidence of a relationship, but the research of Kilbourne & Pickett (2008) found that there was not a direct relationship between knowledge and behavior, instead they suggested that knowledge influences beliefs, which in turn influences attitude and which influences behavior. Though the relationship may be hypothesized in different ways, whether direct or indirect, it should be noted that there are similarities between the two sets of relationships. The first and foremost similarity is that the

relationship between the two variables is hypothesized as positive. Though this is not ideal as the irrationality of the consumers has been pointed out earlier in the discussion regarding obesity and awareness of its consequences. But the relationship has been proved to be true, nevertheless. This does not mean that a 100 percent of people who are exposed to increased knowledge about the environmental concerns or have a belief that environmental catastrophe is underway, will adapt their behavior to green consumption. Rather it suggests that the two seem to have a causal relationship. Another similarity between the two researches is that the relationship is hypothesized as positive, which shall be the basis for the hypotheses in this study as well. The studies also found proof of the fact that the consumers who have a positive attitude towards environmental consequences of their actions, have altered their behavior for the betterment of the ecology (Gadenne, et al., 2011; Kilbourne & Pickett, 2008). It has been stated earlier that if there was a lack of relationship between the environmental beliefs and behaviors, then that would represent a hypocritical attitude on the part of the consumers as they will not be "practicing what they preach" but both the researches, and several others like them, give us an optimistic sense of the relationship between words and actions of the consumers, in that, they are preaching what they are doing or they are doing what they are preaching.

6.2.6 Gender

The difference between the green purchasing behavior of men and women are of interest to the scientific community and this interest is expressed by the large amounts of research papers devoted to the study of this relationship. Before moving further, it is important to take into account the fact that environmental behavior has been considered primarily as a cognitive affair and since men and women possess the same level of intelligence (Tan & Tan, 1998) the reaction of men and women to similar level of knowledge and awareness of environmental consequences should not

be different. Yet it is different, nevertheless. According to past researches women perceive greater responsibility towards the environment compared to men (Lee, 2009). Though this can originate from the inherent difference between how men and women perceive emotions, as women tend to experience more negative emotion than men (Hess, et al., 2000). But the reason for why the difference is prevalent is more of a neurological matter than a sociological matter, therefore this research will only discuss what the differences are, rather than the reason for why the differences exist. Moreover, it was also found that women face greater pressure to conform to the norms of the group compared to men, which why they are more likely to be environmentally-considerate compared to men (Lee, 2009). The study by Lee (2009) also found that women scored higher on green purchasing behavior, environmental concern, and attitude towards environmental problems, peer influence, compared to men. Though it should be stated that the study was limited to finding the differences between adolescents, therefore the study cannot be perfectly generalized for other age groups. Furthermore, the study was conducted in Hong Kong, therefore, it cannot be applied to Ireland with perfect utility because the characteristics of the two countries are vastly different. However, the variance between the men and women should not be assumed as a construct of the social structure of the two countries and there will be some inherent differences between the two genders, nevertheless. But the research by Lee (2009), does provide a basis for conducting quantitative analysis and tells us the expected results from this comparison.

There are other studies which measure the differences between men and women as well. For instance, Arcury (1990) pointed out that women were not as likely as men to be concerned about the environmental consequences of human activity. This is contrary to the research conducted by the Lee (2009), who not only found that women were more likely to be concerned about environmental issues, they were also more likely than men to feel that they are responsible

for fixing these issues. As pointed out earlier, this is in line with the finding that women tend to experience more negative emotion than men, which might just be one of the reasons, if not the only reason for this difference.

6.2.7 Age

Age is the primary object for concern in this research, as it is stated in the title of the research. The millennials are the individuals born between 1981 and 2000 and baby boomers are the individuals who are born between 1946 and 1964 and they started turning sixty in 2011. There is sufficient evidence to support the statement that boomers are not the age group which makes up the majority of the market buying power. Though it can be said that the boomers are the pioneers of the luxury industry, but it should be pointed out that majority of the boomers have retired, therefore, they will no longer be able to support the industry as well as they could have earlier (Kapferer & Michaut-Denizeau, 2019).

A research suggests that there are four reasons as to why the millennials are not buying green products. The generation considers the products too expensive or of inferior quality. They also have trust issues with the products themselves and are unable to differentiate between the two products (Lu & Joseph, 2013). Bearing in mind the finding presented by Kapferer & Michaut-Denizeau (2019) who suggested that the luxury brands do not have to be frightened of losing sales by mellinnials and Lu & Joseph (2013) finding that mellinnials are not fond of the green products, it should be self-evidents that millennials do not care exhibiting green purchasing behavior. But the question remains, as to whether the millennials are more or less sensitive to environmental issues compared to baby boomers.

It should be noted that there is evidence that there is not much differnce between the purchasing behavior between millennials and the older generations (Kapferer & Michaut-

Denizeau, 2019), but that study was not based in Ireland. It would be interesting to note the differences between the beliefs, attitudes and behaviors of the Irish millennials and older generations so that the debate of the sensitivity of millennials to environmental issues can be laid to rest.

Nevertheless, this research will be focused on determining the differences between high-age baby boomer and low-age millennial groups, which is primarily a mathematical comparison rather than a causal experiment.

6.21 Previous Studies to Encourage This Research

Kilbourne & Pickett (2008) is a research that serves as an inspiration for this research. The idea is to determine whether the results that were true in the US would be reproduced in Ireland. Moreover, the research by Kilbourne & Pickett (2008) did not distinguish between the results of different groups based on demographics, which is something that will be done in this research. There are other researches as well such as the work of Gadenne et al (2011) which offers an interesting take on the relationship between the knowledge that individuals hold about the environment and the behavior that they exhibit, or do not exhibit, based on the knowledge. Though the generalizable conclusions of both these researches is the same, that, there is a positive relationship between the knowledge and relationship that consumers hold about the environmental issues and the green purchasing behavior, which provides a solid ground for this research. Barr et al. (2005) also provides evidence of the fact that as consumers become more knowledgeable about the environmental consequences of their actions, they become more and more concerned about their own purchasing behavior and alter it in an attempt to improve their environmental footprint. The interesting part of this research is that it has attempted to reproduce the results to the hypotheses as produced by Kilbourne & Pickett (2008) in a different country. Furthermore, it has

also discussed the differences between the results of different demographics of the sample population, based on age, gender and income group. This enables the readers of this study to understand which group is lacking behind in the race for environmental awareness and green purchasing behavior, so that appropriate strategy and marketing campaigns can be developed to bring them along the rest of the demographics.

There are researches which provide contradictory findings on what the relationship between gender and green purchase behavior is, therefore, it would be particular interesting if this research was to break the tie between the past literary works. Though the overwhelming number of researches suggest that women tend to feel greater responsibility towards the environment than men Lee (2009), there are researchers which present evidence of the contrary and suggest that women tend to be less environmentally-responsible than men Arcury (1990) and thereby exhibit less green purchasing behavior compared to men.

6.22 Additions to Literature by This Study

The academic literature regarding the green marketing and green purchasing behavior is particularly diverse, but it was not evident as to whether a study had been conducted in Ireland which measured the impact of beliefs, attitudes and concerns on the purchasing behavior of Irish consumers. This will be of particular interest to the Irish businesses which have a financial interest in the green products. But the study will not only be useful for the businesses, because it will also provide the scientific community with valuable input from the consumers of Ireland. If the results of the Irish consumers are similar to that of the American consumers, then the two countries are more alike than imaginable. The literature also lacks ample comparisons between different demographic groups, which is another item of interest in this research. Therefore, the contributions that would be made by this research to the scientific literature are sufficient and important.

This research will certainly put a stop to the debate of whether men or women tend to be more environmentally conscious and which of the two groups is more likely to exhibit green purchasing behavior. The research conducted by Arcury (1990) and Lee (2009) are not based in Ireland, therefore, it might be the case that the difference between the results of this study and that of Arcury (1990) and Lee (2009) is because of the geographical and political boundaries. But nevertheless, the differences between men and women when it comes to the responsible purchasing behavior is of particular interest because the two genders make up half of the world's population each and without effort from the both of them, the world is not going to be able to successfully deal with the climate catastrophe.

6.23 Value Generated by This Addition

It is particularly interesting as to why there are inherent differences between different demographic groups, despite the fact that they are all part of the same geographic boundary. Having the same geographic boundaries entails that the people are exposed to the same culture, the same rules and regulations and the same language. Still, if there are differences between different groups, that suggests that the differences were primarily inherent which would be interesting. This research will provide another data point which can be used to develop a robust understanding of the many differences which exists between different demographics and it will help make reasonable predictions about other areas where differences between the demographics might emerge and what will those differences be.

6.24 Procedure to Add Value

The procedure that has been employed in this research is purely scientific, so that the results are objective and generalizable. The scientific method of research ensure that the data is collected objectively, and the results are prepared objectively as well. The procedure also involves providing

hypotheses which are essentially statement that have to either be proved or disproved with empirical analysis. The research will involve conducting self-administered questionnaires using the questions that have been presented in the scientific literature, so that only those items are selected which are credible and have been proven to work by the scientific community. By using the items that have been prepared by credible scientists, the author of this research is standing on the shoulders of giants. This research will also involve the use of tools including but not limited to SPSS to run quantitative analysis on the information collected in the questionnaires. The questionnaires results will be tested for whether they could have occurred by chance so as to find real proof that has the capacity to enable the researcher to accept or reject the hypotheses and make a small contribution to the plethora of the knowledge acquired so far by the scientific community.

6.3 Rationale for Study

There is a growing concern for the environment. It is my sound understanding that the power resides in the hands of millions of consumers who dictate the terms of the market with their money. Whatever the consumers demand, the free market provides. It is in the interest of the human race that the consumers start marking rational decisions about the goods and services they consume, so that the carbon footprint and the environmental footprint of each individual decreases, in an attempt to decrease the overall greenhouse emissions and the impact on the ecology of the planet. Lives are at stake and suffices it to say that this research provides an insight whether or not there is a relationship between increased awareness and increased environmentally-friendly consumption, because if there isn't, then the money the world is spending on trying to make the consumers more aware of the damage their activity is bringing upon the environment, would be better spent on planting trees in an attempt to curb the effects of climate change on the world.

6.31 Connection Clarified with Literature

The connection between the variables has been originally presented in the research by Kilbourne & Pickett (2008). The model, as presented in Appendix B has been adapted to say green purchasing behavior instead of direct and indirect behavior. The model has been based on the works of Kilbourne & Pickett (2008) and Leonidou et al (2010). It should be noted that this is the relationship between the primary variables of the study. For instance, there will be a relationship between the environmental concern and general behavior, but that is not the primary concern of this study. This model has been updated and mentioned in the methodology of the research.

6.32 Presence of Sound Reasoning for Conducting Research

The connection between the variables has been elaborated in great depth throughout the literature review and sources are credible scientific journals, therefore there is sound evidence of the connections between the variables. Furthermore, there is a lack of such research conducted on Irish citizens, which is of great value to the scientific community of Ireland and the businesses with financial interests in the country, which is why this research is not only necessary but beneficial for the future researchers and businessmen.

Furthermore, there is evidence of a positive relationship between awareness of environmental issues and the green purchasing behavior as exhibited by the consumers, which is good news for NGOs who are looking to reduce greenhouse gas emissions by investing in awareness campaigns in Ireland. However, if this research proves that there is not a strong connection between awareness and action then the money to be spent on awareness of consumers would have greater utility elsewhere.

There is a lack of certainty when it comes to the differences between men and women, because some researchers have found evidence to support the statement that men are relatively

responsible compared to women when it comes to green purchasing behavior. Though there are other studies which claim that the opposite is true and provide empirical proof to support their conclusion. Therefore, it isn't exactly clear whether the relationship between gender and green purchasing behavior is positive towards men or women, but there is a difference between the behavior of men and women, nevertheless, which is of particular interest to the scientific community.

6.33 Indication by Literature on How to Conduct Research

The research conducted by Kilbourne & Pickett (2008), which serves as a basis for this study has been conducted using questionnaires. Furthermore, there are other credible researches since the research by Kilbourne & Pickett (2008). They have used the items as developed by the prestigious authors including Leonidou et al(2010). Quantitative research is objective, virtually by definition, because it involves more science than arts. This type of research is rather helpful when it comes to the analysis of non-trivial and controversial issue such as the inherent difference between men and women. Therefore, using quantitative research is not only a common practice in the scientific community, rather it is also a form of research where results cannot be accredited to biases and prejudices.

There is a news article cited in this research as well, which is certainly not anything similar to a scientific research paper (Wee, 2015), but the reason for its inclusion was to get an idea of what some companies in the world are doing to reduce their environmental footprint on the planet. Regardless, the research has been conducted using a quantitative analysis because this is suggested by the literature. The questionnaire items have been adapted and based upon the works of Kilbourne & Pickett (2008). The reliability construct of the item has been mentioned in the research by Kilbourne & Pickett (2008) therefore, it can be said with certainty that the items are

credible and can be used to measure the relationship between the beliefs of environmental issues, attitudes, concerns and green purchasing behavior of the consumers in Ireland.

6.4 Research Questions and Aims

The research plans to determine the relationship between the beliefs that consumers hold about the environmental consequences of their actions and their actions. There are organization which outperform other organizations when it comes to producing goods and services which are environmental-friendly, but the organization alone is not going to be enough to bring about social change unless the consumers are not only aware of the problems that the environment faces as a result of their purchase, but also are willing to spend money for the consumption of goods and services which are relatively better for the environment and help them reduce their environmental footprint. This research aims to find out whether the beliefs and concerns of the consumers translates into a change in consumption of goods and services.

6.41 Hypotheses

The following are personal hypotheses that have been reached after successfully designing and studying for this research. They have been developed by extensively studying, understanding and adapting from the research of Kilbourne & Pickett (2008) and Leonidou et al (2010).

H1a: Deontology has a significant positive relationship with Inward Environmental Attitude.

H1b: Deontology has a significant positive relationship with Outward Environmental Attitude.

H2a: Environmental Beliefs has a significant positive relationship with Inward Environmental Attitude.

H2b: Environmental Beliefs has a significant positive relationship with Outward Environmental Attitude.

H3: Inward Environmental Attitude has a significant positive relationship with Green Purchasing Behavior.

H4: Outward Environmental Attitude has a significant positive relationship with General Environmental Behavior.

H5: Women are more likely to exhibit green purchasing behavior compared to men.

H6: Millennials are more likely to exhibit green purchasing behavior compared to boomers.

7. Methodology

The methodology of this research includes both quantitative and qualitative aspects, deriving and deducing from the works of Kilbourne & Pickett (2008) and Leonidou et al. (2010) just like the hypotheses have been adapted from the same resources. It should be noted however that the H5 and H6 are not taken from the researches mentioned above. The methodology of the research will be similar as that of the scientific literature and quantitative analysis will be used to prove the hypotheses right or wrong. The methodology is discussed in detail in the following headings.

7.1 Participants

It should be mentioned that the sample for the study consisted of university students and retired individuals, therefore, this research reflects the beliefs, perception and behavior of student and retired population in Ireland and it is generalizable to other groups who have similar characteristics to that particular group.

7.11 Type of Sampling Method Used

In the interest of getting a representative sample of the population, it should be the concern of the research that probability sampling is to be used so that all the potential respondents from the population have an equal chance of being selected in the sample. However, given the extraordinary circumstances of the current time, amidst the COVID-19 pandemic, it is not entirely possible to execute a probability sampling procedure, because it is not possible to reach out to specific people in the target population. Instead, the survey had been created into a google form and the link to fill the form had been circulated within the students of different universities in Ireland and the students were asked to share the link with their friends, who were asked to share it with their circles. Thus,

the cycle continues. This sort of sampling is known as snowball sampling and it is possibly the most efficient way to acquire responses in the current times.

7.12 Total Number of Participants

The total number of participants is sixty. The participants have contributed to the research by filling a self-administered questionnaire which was sent via Google Forms. The participants of the study were primarily millennials and boomers, but there was a brief portion of individuals who belonged to neither of the groups. Their responses have been included in the analysis when regression between the variables was being done, but the comparison between the age groups will only include the millennials and the boomers.

7.13 Population for Sample

The population of the study was students of Ireland. There are 225,628 students in all the higher education universities of Ireland as of 2018. Women outnumber men at the undergraduate level, but the ratio is 51-49 therefore is entirely trivial. But the gap between women and men increases as the level of education increases, since there are more women in the post-graduate compared to men at the ratio of 55-45. It can be said that men have a leg up in the part-time courses at the undergraduate level, but the difference in ratio is trivial again i.e. 51-49. 6% of the population of Ireland is enrolled one higher education program or the other (Byrne, 2018). For the purpose of this study, students from Irish universities had been asked to completely fill an online questionnaire and retired persons were contacted through friends and family of the researcher.

7.14 Selection Procedure

It was beyond the control of the researcher to screen the participants before they could fill the questions, but useless responses could've have been removed for analysis had there been any. The responses to the questionnaire consisted primarily of the age group, income group and gender

of the participants, along with their answers to the literature items on a Likert scale. The respondents included millennials and boomers. However, it should be noted that the questionnaire was spread between both men and women in the population because the research required a comparison of the two groups. Similarly, the questionnaires were distributed to respondents belonging to all income groups, so that a large enough sample of all the various income groups is attained, and the researcher is able to conduct a statistical analysis and remove the impact of the income variable. It is likely that people know more people from their own group than the rest and based on this premise sufficient information from majority of the groups was collected.

7.15 Circumstances for Participation

The respondents were asked to contribute to the research without any incentive whatsoever. This was due the fact that the researcher could not physically interact with the respondents. For the time spent filling the questionnaire, the respondents were thanked by the researcher and thorough gratitude was expressed before and after the questionnaire to ensure that the respondents understood how much thankful the researcher was for their time.

7.16 Demographics and Psychographics of the Sample

The sample comprised of students in universities, as a representative of the millennials and retired individuals above sixty years of age who would be representatives of the baby boomer generation. The millennials are going to be studying in either the bachelors or the master's programs in various universities of Ireland. The baby boomers will be retired and will most likely be spending out of their savings and the return on investments. The millennials will be doing part-time work, might be carrying student debt or might be supported by their guardians.

7.2 Research Design

The design of the research determines what the relationship is between the variables and what impact do the variables have on each other. Though this is not a study based on scientific experiments, therefore, it is able to determine the correlation, but is unable to determine the causation.

7.21 Independent Variables

Since the study is based on measuring the impact on behavior of the customers, be it general environmental behavior or green purchasing behavior, or as Kilbourne & Pickett (2008) suggested i.e. indirect and direct behavior, respectively, the non-behavioral variables are to be considered as independent variables. Therefore, in this study, the independent variables include inward environmental attitude, outward environmental attitude, deontology and environmental beliefs. Four relationships have been developed in this research as have been included in Appendix B. The first one is between environmental beliefs (independent), deontology (independent) and inward environmental attitude (dependent). The second one is between environmental beliefs (independent), deontology (independent) and outward environmental attitude (dependent). The third one is between inward environmental beliefs (independent) and green purchasing behavior (dependent) and the last one is between outward environmental beliefs (independent) and general environmental behavior (dependent).

7.22 Dependent Variables

The dependent variables include the general environmental behavior and the green purchasing behavior in the second level of the construct. The general environmental behavior is concerned with the indirect behavior that impacts the environment by means such as assisting environmental NGOs, acquiring knowledge about environmental issues and contacting the local

government representative about environmental concerns. These actions will not directly curb the demand of goods and services which are environmentally damaging, nor will they consequently decrease the production of goods and services which are damaging the environment. However, there is a probability that these behaviors will impact the greenhouse emissions and other environmental degradations by encouraging consumers to shift their buying behavior and encouraging governments to increase the restrictions of organizations to better manage their activities in an attempt to decrease the cost to the environment that occurs as a result of organizational activities. As stated earlier, there are organizations like AT&T which are enforcing rules upon their own activities and are therefore doing their part to help curb the pandemic (Wee, 2015), but much more effort is needed if we are to hope for a halt in the eminent climate meltdown, therefore, this study provides an insight into what factors tend to be associated with green purchasing behavior so that the most efficient one can be selected.

7.23 Experimental and Control Groups

This study will be based on one questionnaire and will not isolate between the experimental group and the control group. The study will not require the participation of any respondent more than once and will only deliver a correlation between the variables mentioned prior. The study will only require the students and retirees to contribute their responses of a single questionnaire at a single point in time and the quantitative analysis will be more of a comparison of means between the two demographics. Since the study is not longitudinal and there are no undocumented factors that could have altered the behavior of the participants during the time of the study, which is usually the reason for a control group, there is no need to create a control group for the purpose of this study.

7.24 Assigning Participants to Groups

It should be taken into consideration that all the participants have been asked to fill the same questionnaire and they have not been divided into groups for the purpose of data collection. However, the participants have been divided on the basis of their demographics to compare the difference in responses of different demographical groups, such as men and women, or millennials and baby boomers. It would be particularly interesting to notice the differences between different demographics as it makes us aware of which group is more responsive to environmental awareness and which is group is doing relatively more for the purpose of making the environment better.

7.25 Design of the Study

The design examines whether or not there exists a relationship between the variables. The more the correlation between the variables, the more confidently it can be said that the change in one variable will be able to influence a change in the other variable. This study is influenced by Kilbourne & Pickett (2008), Chen (2010) and Leonidou et al. (2010), therefore the design of the study has been inspired by the relationship between the variables as suggested by the three researchers. The model in Appendix B has been created based on the works of the authors mentioned above.

It should be evident that because the independent variables impact the two variables, the design of the research would be much better explained if two models are used instead of one. However, since the dependent variables at the end only have one independent variable, it is reasonable to have one model established instead of two. The model is presented in Appendix B.

7.3 Materials and Apparatus

7.31 Questionnaire Used

As mentioned earlier, the six variables below have been selected from the literature. The factor loadings for the questions, as stated by Kilbourne and Pickett (2008) and Chen (2010) have been mentioned alongside them in Appendix A to show that the items were confirmed to be reliable. The questionnaires have been taken from Kilbourne and Pickett (2008) and Chen (2010). The questionnaire had been tested in other studies as well (Leonidou, et al., 2010), which makes the questionnaire more reliable and valid.

7.31.1 Number of items.

There were 32 items in the questionnaire which were related to the independent and the dependent variables. There were additional items for the questionnaire which collected the demographic information from the users. The questions asked for age, gender and income of the respondents. It should be noted that even though the demographic variables are not going to be essential when finding out the correlation between the dependent and independent variables, but it will help identify the differences between different age groups and the difference between the men and women in the respondents.

7.31.2 Sample of items used.

All the items of the questionnaire have been utilized because their factor loadings were greater than 0.6, which meet the criteria as set forth by (Hair, et al., 1998). This was to be the case because the questionnaire developed by Kilbourne and Pickett (2008) had already been used in its entirety by other researchers as well and only those statement which passed the benchmark of factor loadings and model fit index had been included in the research originally by Kilbourne and Pickett (2008) and thereafter by other researchers including but not limited to Leonidou et al.

(2010). Therefore, all the items as produced by Kilbourne and Pickett (2008) have been included in the research as they came up to the benchmark. All 32 items which had been determined as fit for this research were included in the questionnaire.

7.31.3 Instruction for participants.

The questionnaire was self-administered, and the respondents were requested to answer the questions truthfully. The questionnaire required the participants to select an option between strongly disagree and strongly agree. The questionnaire was particularly easy to understand, and it followed the same pattern as the rest of academic questionnaire which the students are aware of. However, the retired individuals would have come across such instruments in their lives as well. Particularly because the Likert scale is a common tool, it is certainly likely that the respondent will be familiar. The questionnaire did mention that the information provided by the respondents will be used for educational purposes only and informed the respondents of their rights.

7.31.4 Range of possible sources

The sources of information were limited to the respondents and the secondary information sources. The three sources for the questionnaire items were Kilbourne and Pickett (2008), Leonidou et al. (2010) and Chen (2010). The respondents filled the information of the items presented in the literature

7.31.5 Reliability and validity of the scale

Table 1 Cronbach's Alpha

Variable Name	Cronbach's Alpha
Outward Environmental Attitude	.884
Inward Environmental Attitude	.878
General Environment Behavior	.773
Deontology	.927
Environmental Beliefs	.770

As mentioned earlier, the items

Green Purchasing Behavior	.744

of the questionnaire were passed based on the benchmark as set forth by Hair et al. (1998) which was a Cronbach's Alpha of greater than 0.6. Therefore, it is certain that the questionnaire used is reliable and valid. The items in the questionnaire are reliable, but the results which are analyzed on the basis of the responses of these items have been tested for their reliability as well.

7.31.6 Expected responses.

The results are predicted to show that there is a positive relationship between the variables of the study, with the significance of the relationship between the variables turning out less than 0.05 show that the relationships between the variables are significant and effective. The results include an analysis of the mean and standard deviation of each of the variables. Even though it is hoped that the "words" do match the "actions" of the consumers, but based on the idea that humans are not the most rational creatures, it is unlikely even if the consumers are aware of the environmental problems and even if they are convinced that is it the anthropogenic activity which is causing the environment catastrophe, that they would alter their behavior for the betterment of themselves.

7.32 Document Used

The documents that have been used for the research are the questionnaire for the research and the consent form. Though it should be noted that since the questionnaires were filled online, and because it was predicted that they would have difficulty being a part of the research if they were required to fill two distinct form, it was mentioned in the description of the form that consent of the respondent will be assumed if the respondent is continuing to fill the questionnaire. Therefore, the respondent did not have to fill two forms and could opt out of the research by simply not filling the questionnaire.

7.4 Procedure

Since the questionnaire was self-administered and online, the respondents were required to exert less effort than what would have been the case if the questionnaire was to be filled on paper. It would have required more effort from the researcher as well, because the data collected on paper questionnaires would have to be entered into a computer, which is a gruesome and excruciating task, but thanks to the existence of Google Forms, the effort of both the researcher and the respondents was minimized. Furthermore, there is the possible chance of error when inputting the results from the paper questionnaire to the computer, which is also avoided if Google forms are used.

7.41 Detailed Procedure Followed by Participants

The participants were sent the Google form link to the questionnaire through messages on WhatsApp, mail and iMessage and they could open the link and fill the question on their computer or their smartphones. It can be speculated that majority of the responses would have filled it from a smartphone. The participants were required to fill all the question. Though it would have been easier for the respondents to fill the question from the first to the last in order, but they could fill the questionnaire in any order they see fit. The participants were required to select one option from the multiple-choice questions in the questionnaire.

7.42 Timing and Length of the Study

The study has been conducted over the course of a single term of Dublin Business School. The study required no more contribution from the researchers but the one-time questionnaire responses that would be submitted via Google forms to the researcher and the questionnaire would have taken no more than three-four minutes to fill per person. The research prior to the questionnaire and the analysis of the responses afterwards is what took majority of the time.

7.5 Ethics

This research was conducted in accordance of the ethical constraints as set forth by DBS. The reader can be rest assured that the responses were completely anonymous and not in violation of any of rules of the university or Ireland.

7.51 Right of Withdrawal

The participants had the choice to withdraw from the research at any point, up until the moment they press the submit button after completely filling the questionnaire. After pressing the button, it was not possible to know which response was of which participant because the questionnaires were anonymous.

7.52 Anonymity

The questionnaire did not require the respondents to give out any information whatsoever that was personal, including name, contact info, etc. This was done in an attempt to keep the research objective and unbiased and the identity of the respondents hidden. The respondents were not required to enter affiliations; therefore, it cannot be determined how much of the millennials belonged to the DBS and how much of them were affiliated with other universities. But it is assumed that there was a representative sample of the millennials in the responses, along with a representative sample of the boomers.

7.53 Informed Consent

As mentioned earlier, the respondents were informed in the description of the research that is presented under the title that if they proceeded to fill out the questionnaire, it will be assumed that they consent to their responses being used for educational purposes. The respondents were told that their responses will be anonymous, therefore, there is no way for anyone to know which response belongs to whom and furthermore, the responses would be discarded at the end of the

research, therefore the respondents can be sure that their information will not be used for their demise.

7.6 Data Analysis Tools

7.61 Descriptive Statistics

The descriptive statistics of the research include the means and standard deviations of the responses based on the variables. The tools used for this would be the SPSS software, however, the responses will be originally compiled in the Microsoft Excel. This is because the data in the Google Forms is downloadable in a format that can be read by Excel and not by SPSS. Furthermore, since the responses were in words i.e. strongly agree, strongly disagree, etc., it was essential for these words to be converted into number for SPSS to conduct quantitative analysis on them. The statistics will be analyzed on a basic level, but it will be enough to get the idea of the overarching results of study, but it will not be enough to confirm the significance of the relationship between the variables. For the significance of the relationship between the variables and the strength of the influence that the independent variables will have on the dependent ones will have to be determined using the inferential statistics.

7.62 Inferential Statistics

These statistics will determine whether the correlation between the variables is the result of chance or is the relationship between the variables the result of a real connection amongst the factors at play. These statistics will be used to confirm or deny the hypotheses that had been stated prior. It should be noted that there are two ways available to us to determine whether one demographic is keener towards green purchasing behavior compared to the other. The first one is the comparison of means of the groups. The means will inform the researcher that whether or average one group supersedes the other when it comes to green purchasing behavior. But this is

potentially an incomplete analysis, because it cannot be determined whether the difference between the means will be because of the inherent differences between the two groups or the fact that one of the groups is less aware of environmental problems or has less faith in the environmental sciences findings. To counter this, separate regression analysis for the two groups can be conducted to find out which group is more concerned about their own green purchasing behavior and what is the contributing factor, so that the differences between the groups can be mitigated if it is pivotal for the sustainability of the human race. This procedure will be utilized to determine the differences between millennials and baby boomers, and men and women.

8. Results

8.1 Overview of Results

The table below shows the means and standard deviation of the variable of the research. What is interesting to note is the difference between the mean of Environmental Beliefs and the mean of Green Purchasing Behavior. Notice that there are two behaviors in the list of behaviors. The first on is the general environmental behavior, which is also cited as the indirect behavior and the second one is the green purchasing behavior, also known as direct behavior (Kilbourne & Pickett, 2008). Both the behaviors have the lowest means of all the variables despite the fact that environmental belief has the highest mean. Furthermore, green purchasing behavior has the lowest standard deviation. What this suggests is that even though the people are convinced that the climate is going through unprecedented changes and they are aware of its anthropogenic sources, but they are not willing to change their behavior for the betterment of the environment. The reason why green purchasing behavior has the lowest standard deviation is that the respondents were consistent with their response, in that, more people select the same or similar options.

Table 2 Descriptive Statistics

Variables	Mean	Standard Deviation
Outward Environmental Attitude (OEA)	4.66	0.73
Inward Environmental Attitude (IEA)	5.59	0.62
General Environment Behavior (GEB)	2.05	0.85
Deontology (D)	5.13	0.58
Environmental Beliefs (EB)	6.20	0.57
Green Purchasing Behavior (GPB)	1.84	0.47

8.2 Descriptive Statistics

8.21 Overview of Descriptive Statistics

Before progressing with discussion of the descriptive statistics it is imperative to introduce the division of demographics in the research. Table 3 shows the number of respondents in each category. It should be noted that the largest number of respondents based on age were in the age

group of 18-25 at 33 followed by the respondent in the age group of fifty and above at 21. Suffices it to say that we have sufficient sample of both these age groups for comparison.

The women outweigh the men in the sample but not by a large number. Therefore, there is representative sample of all the groups which will need to be compared. There is a relatively normal distribution of income in the demographics as well therefore, it can be said that any effect that higher or lower income will create is mitigated.

Table 3 Demographics

Variable	Group	Number of Respondents
Age	18-25	33
	26-33	3
	34-41	2
	42-49	1
	50 and above	21
Gender	Male	27
	Female	33
Annual Income	<37,000	6
	37,000-40,000	17
	40,000-43,000	11
	43,000-49,000	20
	>49,000	6

Table 4 One-Sample Test

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
IEA	49.31	59	0.00	4.66	4.47	4.84
OEA	70.34	59	0.00	5.59	5.43	5.75
GEB	18.61	59	0.00	2.05	1.83	2.27
D	68.40	59	0.00	5.13	4.98	5.28
EB	84.58	59	0.00	6.20	6.05	6.34
GPB	30.56	59	0.00	1.84	1.72	1.97

The table above shows that the significance of the variables is less than 0.05 which confirms the significance of the variables in the responses.

8.22 Interpretation

The difference in means suggest that there is an inconsistency between what the people say and what they do. If this is the case, it is entirely likely that the model turns out to be insignificant, because it is certainly not able to predict the relationship between the means of IEA, OEA, D, EB and the dependent variables which include GEB and GPB. It is particularly daunting to understand this finding because it puts shines a very pessimistic light over the matter of environmental catastrophe. There are differences between the variables which are less excessive, but the differences between Environmental Beliefs (EB) and Green Purchasing Behavior (GPB) is preposterous. It would be reasonable for the GPB mean to be so low if the consumers were not aware of the environment catastrophe, but the fact that EB mean is above six shows that majority of the people agreed that there is a climate catastrophe underway. Yet, the GPB is below two which means that despite the people believing that is imminent threat, majority of the consumers are not keen on shifting their behavior.

8.3 Inferential Statistics

8.31 Overview of Inferential Statistics

These will offer conclusive proof of whether there is relationship between the variables or not. The more likely it is that the changes in the variables is the result of chance, the less likely it is that the variables are related to each other. If the beliefs, attitudes and perceptions of the consumers about the environment is influencing the changes in the behavior of the consumers, then there will be conclusive proof in the correlation and the regression. It would be wise to discuss the correlations between the variables first.

Table 5 Correlations						
Variable	IEA	OEA	GEB	D	EB	GPB
IEA						
OEA	.710**					
GEB	-.323*	-.161				
D	.970**	.860**	-.288*			
EB	.164	.476**	.112	.283*		
GPB	.422**	.533	.052	.490**	-.494**	

* Significant at 0.05 two-tailed
** Significant at 0.01 two-tailed

The lack of significant correlations in this table shows that the variables are rather independent of one another and all of them do not have as good an impact on each other as it would have been hoped. Unsurprisingly, there is a negative relationship between the EB and GPB, which suggests the same conclusion as had been suggested earlier that the respondents are convinced that there is an environmental catastrophe approaching and it is the human activity that is causing it to approach faster than ever before, in that global temperatures are rising and there will be water shortages in the coming years, etc., yet the respondents have not changed their behavior as yet.

However, against expectations, there is a positive relationship correlation between Inward Environmental Attitude (IEA) and the GBP. Bearing in mind the model for this research, as is presented in Appendix B, there is no direct relationship between EB and GPB or GEB. However, it should be noted that the correlation indicates that GPB tends to move along the same lines as EB and it is hypothesized that this is because of IEA.

Correlations, useful as they may be, are no substitute for regression analysis. The first set of relationship has two independent variables, i.e. EB and D, and they will be predicting two dependent variables separately, i.e. IEA and OEA. The regression analysis for the both are as follows.

Table 6 Coefficient for Inward Environmental Attitude

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-4.605	0.575		-8.009	0.000
	EB	0.284	0.071	0.120	4.024	0.000
	D	1.455	0.043	1.004	33.637	0.000

a. Dependent Variable: IEA

The following hypotheses rely on the acceptance of this regression analysis:

H1a: Deontology has a significant positive relationship with Inward Environmental Attitude.

H2a: Environmental Beliefs has a significant positive relationship with Inward Environmental Attitude.

The R^2 for this model is .953 which suggests that these two variables almost complete predict IEA. EB and D have a significant positive relationship with IEA which means that they are reasonable predictors of the variable. The interesting thing to note is that the relationship between D and IEA is more significant than EB and IEA. What is furthermore interesting is that the constant is negative, which suggests that people generally have a negative attitude towards environmental issues. H1a and H2a have been accepted based on the results of the regression analysis in Table 6.

The second relationship is between OEA and EB and D, in which OEA in the dependent variable and EB and D, are the independent variables. The following table shows the regression analysis of this relationship. It should be noted that the variables have a positive relationship as hypothesized and significant as well. What should be seen is that the impact of D on OEA is nearly twice that the influence of EB. Recall back to the Table 6 that the impact of D was stronger on IEA compared to EB. A conclusion can be made that Deontology is a better predictor of Environmental Attitude whether Inward or Outward, compared to the impact of EB.

Table 7 Coefficient for Outward Environmental Attitude

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4.592	0.572		8.032	0.000
	EB	0.286	0.070	0.252	4.076	0.000
	D	0.548	0.043	0.789	12.743	0.000

a. Dependent Variable: OEA

The following hypotheses rely on the acceptance of this regression analysis:

H1b: Deontology has a significant positive relationship with Outward Environmental Attitude.

H2b: Environmental Beliefs has a significant positive relationship with Outward Environmental Attitude.

The R^2 for this model is 0.799; therefore, it can be said that EB and D are significant predictors of majority of the variance in OEA. H1b and H2b are accepted. It should be stated all of these conclusions are consistent with that of Leonidou et al (2010).

The first order of relationships between the variables are completed. It is now time to determine the strength of the relationships between IEA and GPB. Thereafter, the relationship between OEA and GEB will be considered. Bear in mind that the GEB is indirect behavior of consumers Kilbourne & Pickett (2008), which means that it is not directly impacting the purchase pattern of green products by the consumer, instead it concerns itself with items such as being a part of an environmental organization or being a contributor to an environmental organization or doing other activities which either involve encouraging others to make better decisions concerning the environment, or encouraging green behavior in one's own life. The following hypothesis will be confirmed or denied in the next regression.

H3: Inward Environmental Attitude has a significant positive relationship with Green Purchasing Behavior.

As shown in the model on Appendix B, a direct and positive relationship is hypothesized between the IEA and GPB. Though the means of the two were vastly different, it is likely a negative relationship emerges. This suspicion was not confirmed by the fact that the correlation between the two relationships is positive, but it makes the results of the regression analysis all the more necessary.

Table 8 Coefficient for Green Purchasing Behavior

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.823	0.260		3.162	0.002
	IEA	0.152	0.043	0.422	3.547	0.001

a. Dependent Variable: GPB

The relationship is indeed positive, but the fact of the matter is that the constant is far more than the beta of IEA. The relationship between the two variables is significant as the significance value is less than 0.05, but the beta coefficient is very small. The interesting stat to notice is the difference between the standardized and the unstandardized beta, which suggests that in this scenario, standardizing variables might be helpful in predicting variables. Regardless, H3 is accepted.

The set relationship is between Outward Environmental Attitude and General Environmental Behavior. The following hypothesis was developed by Leonidou et al (2010) as were the rest of the hypotheses and regression analysis will be conducted to measure the strength and validity of the relationships. Thy hypothesis that is being tested is as follows:

H4: Outward Environmental Attitude has a significant positive relationship with General Environmental Behavior.

The following table contains the results of the regression analysis in which OEA was the independent variable and GEB was the dependent. This marks the last relationship that was being considered among variables in this analysis. Table 9 shows that the variable OEA has an insignificant relationship with GEB. The R^2 of the table is 0.026 which suggest that the model is unable to predict a significant relationship between the variables. Recall that the correlations between these two variables were also negative and insignificant.

Table 9 Coefficient for General Environmental Behavior

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.523	0.683		3.696	0.000
	OAE	-0.138	0.111	-0.161	-1.240	0.220

a. Dependent Variable: GEB

H4 has not be proven right, therefore the relationship between the two variables for it. It is not premature now to conclude that the words do not always translate into action, but it is not the case that we do not have sufficient evidence of words translating into action. Recall Table 8 which showed that there was a significant positive relationship between the variables GPB and IEA. That offered proof of the concept that as the attitude of the consumers towards the environmental-conscious behavior improves, the consumer is more likely to engage in green purchasing behavior.

It should be noted that in both these models, the value for the constant was bigger than the value for the predicted value. Furthermore, the R^2 of relationship between OEA and GEB was 0.026 which is not a reasonable. Therefore, H4 is rejected.

Here onwards, the comparisons between the men and women and the millennials and the boomers will be taken into consideration. The hypothesis related to the difference between men and women is as follows:

H5: Women are more likely to exhibit green purchasing behavior compared to men.

The first step to determining whether this hypothesis holds ground is to compare the means of green purchasing behavior or men and women. This way the difference between the two can be easily observed.

Table 10 Group Statistics of Gender

Gender		N	Mean	Std. Deviation	Std. Error Mean
GPB	Male	27	1.75	0.24	0.05
	Female	33	1.72	0.39	0.06

The table shows that the hypothesis is indeed untrue, because it is the men who are exhibiting more environmentally concerned purchasing compared to women. Though the difference between the two genders is trivial. Though the difference exits but it should be noted that the standard deviation of the females is bigger, which means that men are more consistent with their purchasing behavior, but women are more likely to have deviant purchasing behavior compared to the mean.

The regression analysis will confirm whether the relationship between the IEA and GPB is stronger in the case of men or in the case of women. Though the hypothesis has been confirmed as men are exhibiting more green purchasing behavior compared to women, but this regression analysis will confirm whether IEA is the reason for it.

Table 11 Coefficient for Green Purchasing Behavior for Men

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.272	0.305		4.166	0.000
	IEA	0.084	0.052	0.307	1.610	0.120

a. Dependent Variable: GPB
b. Selecting only cases for which Gender = Male

Table 12 Coefficient for Green Purchasing Behavior for Women

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	0.317	0.405		0.783	0.439
	IEA	0.226	0.065	0.531	3.490	0.001

a. Dependent Variable: GPB
b. Selecting only cases for which Gender = Female

The tables above show that the relationship between the variables IEA and GPB are not significant in the case of men, which means that it is not the attitude that is bringing about change in green purchasing behavior of men, where it is significant in the case of women. Bear in mind that these results do not offer the same conclusion as the mean test, as the mean test confirm the difference between the purchasing behavior of men and women and the regression analysis only confirms whether the IEA is the reason for the difference. H5 is rejected, based on the mean differences between men and women. Even though the difference is not large, it is sufficient enough to deny the presumption that women exhibit more green purchasing behavior than men.

The next hypothesis is determining the difference between the age groups when it comes to the green purchasing behavior. Similar procedure will be used to confirm whether the hypothesis is correct or not.

H6: Millennials are more likely to exhibit green purchasing behavior compared to boomers.

The following table shows the means and standard deviation of the green purchasing behavior of the two groups.

Table 13 Group Statistics of Age Group

Age Group		N	Mean	Std. Deviation	Std. Error Mean
GPB	Millennials	33	1.7500	0.29475	0.05131
	Boomers	21	1.6643	0.35998	0.07855

The statistics show that millennials are more likely to exhibit green purchasing behavior compared to boomers. This however does not confirm the idea that there are inherent differences between millennials and boomers. This also does not confirm whether it is the IEA that is resulting in the difference between millennials and boomers and for that a regression analysis is to be conducted.

Table 14 Coefficient for Green Purchasing Behavior for Millennials

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.053	0.312		3.380	0.002
	IEA	0.117	0.052	0.377	2.265	0.031

a. Dependent Variable: GPB
b. Selecting only cases for which Age = 1 (Millennials)

Table 12 Coefficient for Green Purchasing Behavior for Boomers

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-0.489	0.322		-1.520	0.145
	IEA	0.348	0.052	0.840	6.751	0.000

a. Dependent Variable: GPB
b. Selecting only cases for which Age = 5 (Boomers)

Notice that both of the regression analyses were significant but the coefficient for millennials was nearly one-third that of the boomers.

8.32 Interpretation

The first order of relationship as suggested by the hypotheses have been proven, in that Deontology and Environmental Beliefs do have a positive relationship with Inward and Outward Environmental Attitude. Inward Environmental Attitude had a significant relationship with Green Purchasing Behavior, but on the other hand, Outward Environmental Attitude did not have as

significant relationship with General Environmental Behavior. What this suggests that, if the consumers are convinced that the environment is under catastrophe, they will change their attitudes about the environment and they will change their own purchasing behavior but they will not be convinced to help other consumers changed their behavior or help environmental organizations change the perception of other consumers.

Furthermore, men are more likely to exhibit green purchasing behavior compared to women and millennials are more likely to exhibit green purchasing behavior compared to baby boomers. These conclusion about the group differences might differ from those found by other researchers and might be alike those of others, partly because there are different conditions in every location and partly because of other factors will be discussed in the next section.

9. Discussion

It is important to mention that there are two sets of relationships in this research. The first set of relationships involves Deontology (D) and Environmental Beliefs (EB) as independent variables and Inward Environmental Attitude (IEA) and Outward Environmental Attitude (OEA) as dependent variables. Thereafter, the second set of relationship involves IEA acting as an independent variable and predicting Green Purchasing Behavior (GPB) and OEA acting as an independent variable and predicting Green Environmental Behavior (GEB). Here onwards the variables will be referred to by their abbreviations.

9.1 Aim of Research

The aim of the research was to develop a complete understanding of the factors which influence the behavior of consumers specifically related to green marketing. It had been noted that the power to alter the course towards environmental sustainability is not solely in the hands of big businesses and governments, the power resides in the hands of millions of consumers who can force change into the market force of demand and supply in a way that is beneficial for the environment. Therefore, this research aimed to find the motivating factors which encourage consumers to engage in GPB and GEB. If the consumption of the consumers is environmental-friendly, it means that the production of goods and services will have to be environmental-friendly as well.

If every individual takes into account his or her own carbon footprint before making a purchase, the overall greenhouse emissions in the world might come to a halt and perhaps the damage done to the ecology of the planet can be reversed and the human race might be able to achieve sustainability. Therefore, it is important to understand what factors actually influence the consumer to make green purchasing decisions, which has been the focus of this research. A

secondary aim of the study was to find out which demographic group was more likely to exhibit green purchasing behavior compared to others. This was not done to see which group is the least responsible for the environmental catastrophe, because associating group guilt is not something that is admirable, not only because it might fail to produce result, but also because not everyone in the group behaves like the group in all categories.

Rather, this was done to learn which group can be used to influence other demographic groups if possible. If the message of environmental issues and the consequences of these issues is understood by one group, then that group can play a pivotal role in explaining the problem to their friends and family so that the message can infiltrate other demographics.

9.2 Summary of Findings

EB and D had been hypothesized to have a positive and significant relationship with IEA and OEA. These relationships were proved to be true and the empirical proof confirmed the hypothesis that had been developed earlier. D ($\beta = 1.45$) had a stronger influence on IEA compared to the influence of EB ($\beta = 0.28$). However, when it came to predict OEA, the differences between the influence of the variables were mitigated as the beta of EB was 0.28 and the beta for D was 0.54. It should be mentioned that the D is a stronger predictor of environmental attitude whether inward or outward.

Deontology is more of an ethical framework, which suggests that it is the action itself which determines whether the action is right or wrong, rather than the consequence of that action. The items for Deontology had been taken from the work of Chen (2010) and the items asked the respondents to tell how concerned they were about the environment, how concerned they were about the future generations and how concerned they were about reducing waste. These kinds of items are likely to be strong predictors of the environmental attitude of the consumers and it makes

the variable a strong influencer of variables concerned with the behavior of the respondents. This can be observed in table 5 correlations, because the largest positive correlation of every variable in the construct is with D. This finding is particularly interesting, and it informs the researcher about the importance of D when it comes to the altering the behavior of the consumers.

The next set of relationships were between IEA and GPB, and OEA and GEB. The relationship between IEA and GPB was significant, however, it was noted that the coefficient of the independent variable i.e. IEA, was less than a quarter of the constant for that variable, as can be seen in table 8. This suggests that the magnitude of influence that IEA has on GPB is rather small, compared to the default level of GPB in the sample population. Nevertheless, the hypothesized relationship turned out to be positive.

The relationship between OEA and GEB was hypothesized to be positive and significant. The relationship, however, turned out to be negative and insignificant. It should be noted that the constant for GEB was high and significant, which suggests that consumers are already concerned about their behavior that indirectly influences the environment and they are actively interested in managing their purchasing.

What is interesting to note is the standardized beta for IEA when it comes to predicting GPB. The standardized beta is more than three times that of the unstandardized beta, which might suggest if the calculation of the variable were to be standardized, the variables might be predicted with much better accuracy compared to what would be the case, if the unstandardized regression was used.

The results also included a comparison between the green purchasing behavior of men and women, and it was found that men tend to engage in GPB more than women, but it was not because of the IEA as men's regression between IEA and GPB should that the impact was insignificant.

The finding suggests that men tend to engage in environmental-friendly behavior more often than women, but it should also be mentioned that the difference between the two is trivial and it might be qualified as no difference at all. But the crucial difference between the behavior of men and women is that the relationship between IEA and GPB was significant for women and insignificant for men.

The results also include a comparison between Millennials and Baby Boomers to understand which group has more care for the environment that is reflected in their GPB. As stated earlier, this was not done to associate group guilt, rather the aim was to determine which group can be influenced easily. Millennials tended to engage in green purchasing behavior more often than Baby Boomers. However, it should be noted that IEA had three times the influence on GPB of Boomers than it did on the GPB of Millennials. This provides an interesting insight into how to improve the GPB of Boomers and it certainly needs to be improved because the constant of GPB for Boomers is -0.489, whereas it is 1.053 for Millennials. The findings of the group comparison were more informative than the findings of the first four hypotheses in this research and it is not because the data presented elsewhere in the research was untrue of offered a less than complete view of the different variables involved in the engagement in GPB. Rather, it is because once the groups have been compared, the research has offered clear and actionable intelligence into how to improve the GPB of demographic groups which are lacking behind.

9.3 Support or Otherwise of Hypothesis

The question that was vexing for Kilbourne & Pickett (2008) was why a difference between attitude and behavior was there. It has been well known that the consumption of good, in terms of the quality and the quantity consumed, is complicit to the environmental problem. The research by Kilbourne & Pickett (2008) was especially interesting because it said "*Individuals simply do not*

like to see themselves as profligate consumers whose desire for material goods is destroying the environment at accelerating rates". There is a lot of utility, especially social utility for moral posturing and the difference between attitude and behavior is this regard can only be mitigated if the individuals changed their views about materialism and also changed their thoughts about how the environment is impacted by their consumption. This research holds the same perspective and it has been reinforced throughout the research that power to bring about change in the economics of the world resides in the hands of millions of people, who by virtue of consuming goods and services determine what gets produced, how it gets produced and for whom it gets produced.

This research confirms the hypothesis that EB and D impact IEA and OEA, as was confirmed by Kilbourne & Pickett (2008) and Leonidou et al. (2010). It should be mentioned that IEA is concerned with purchasing eco-friendly goods and services, whereas OEA is concerned with taking a public stance in support of the environmental sustainability. This research also confirms the hypothesis that IEA has a positive impact on GPB, which has also been confirmed by Kilbourne & Pickett (2008) and Leonidou et al. (2010). However, this research does not confirm the hypothesis that OEA has a positive relationship with GEB as confirmed by Leonidou et al. (2010) which is a cause for concern. This is not surprising however, because Trivedi, et al (2018) have already found evidence of the fact that Outward Environmental Attitude did not have any influence on behavior. It is interesting to speculate why that is the case.

The devil is in the details and it would be fruitful to revisit the definition of OEA. Based on the works of Leonidou et al. (2010) it can be said that while IEA represents the view of the individual about individual action needed to preserve the environment, OEA represents the view of the individual about collective action needed to preserve the environment. This is interestingly comparable to the problem of streetlights when there is not government. Everyone will benefit

from a street light as it would illuminate the pathway to home, just like everyone will benefit from an increase in green purchasing behavior, but because no one can be stopped from reaping the benefits which are paid for by another individual, it makes logical sense for individuals to wait for others to do something so that they can free ride. The incentive to do it yourself is low, whereas the incentive to wait and let others do it is high. This is the speculated reason for why there is a lack of connection between OEA and green behavior.

What is strange is that the coefficient for OEA as a predictor for GPB in this study was insignificant at -0.14 and the coefficient for OEA in the study by Trivedi et al (2018) was insignificant at -0.16. Though Trivedi et al (2018) was studying the influence of OEA on Purchase Intention which had an impact on GPB, therefore there is an additional variable in their construct, but it is reasonable to say that based on the results of Trivedi et al (2018) and this research that OEA does not influence behavior.

Relationship between the variables is not the only concern of this paper as it also offers a comparison between men and women, and millennials and boomers. Men, contrary to expectations, are more likely than women to engage in green purchasing behavior. Though this is not because men are more likely to respond to IAE. Quite the contrary, men's regression for GPB showed that IAE is an insignificant variable, but the constant for GPB is high to begin with. Relatively, women are less likely to engage in green purchasing behavior, but their green purchasing behavior can be influenced strongly by IAE. This suggests that even though men are more likely than women to have a higher green purchasing behavior, but it is the women who are easy to influence through IEA, because men's regression for GPB, found IEA to be an insignificant predictor for GBP.

Millennials are indeed more likely to engage in green purchasing behavior compared to boomer, but to expectation, the relationship between IEA and GPB is smaller in the case of millennials bad larger in the case of boomers. However, it is also worthwhile to mention that the constant for the GPB by baby boomers is a negative, which suggests they not have no interest in engaging in GPB, but they also want to not make green purchases by default. The findings suggest that even though millennials are relatively positive about GPB, their behavior is very difficult to change through IEA, which is not the case with baby boomers, who have nearly three times the coefficient of IEA for predicting the variable GPB.

9.4 Relation of Findings to Literature

It is not enough to know that the findings of this research coincide with the findings of other researches, because that constitute a surface level understanding of the variables at play. What is needed henceforth is a profound understanding of the motivators of green behavior that have been empirically proven in this research, with the discussion of other researchers to reach a consensus of opinion.

IEA was positively influencing GPB in this research and in the research by Kilbourne & Pickett (2008) and Leonidou et al. (2010) which suggest that the key to influencing consumers to engage in buying of green products is to try to influence their Inward Environmental Attitude. This is something that has been suggested in this research and in the research by others. But the question is how to influence IEA. It is crucial to reestablish the operational definition of the variable before progressing further. As noted earlier, it is the view of the individual about individual action needed to preserve the environment.

It serves as a motivation to try to change the condition of the environment by oneself. Now that the definition is established, it is important to learn how to increase it. This research has

determined the answer to that as well and it coincides with the factors that have been presented in the research by Trivedi et al (2018) and Leonidou et al. (2010) among others.

It has been noted that the EB and D have a positive influence on IEA in this research. In the study by Kilbourne & Pickett (2008) it was found that EB has an impact on Environmental Concern and that has a positive impact on GPB and GEB. Since EB is the belief that environmental problems exist, it is incredibly essential for it to exist before the consumer can engage in green purchasing behavior. If the consumers are not aware of the environmental problems that are prevalent on our planet, it will not be possible for them to behave accordingly.

A research by McCarty & Shrum (2001) was conducted on the impact of the belief about recycling on recycling behavior. Though the difference between recycling and overall environmental issues exists, but since recycling is one of the solutions to the problem of the environment, it is reasonable for the two to be compared. The research found that beliefs about recycling had a direct influence on the recycling behavior of consumers. What is interesting is the constructs of the various researches cited in this literature.

The research by Kilbourne & Pickett (2008) suggests that environmental beliefs influence environmental concern which influences green behavior. The research by McCarty & Shrum (2001) states that beliefs have a direct relationship with green behavior. The research by Lee (2009) also hypothesized that there is a direct link between the perceived seriousness of environmental beliefs and the purchase behavior, however the hypothesis was not supported by the findings of the research. Leonidou et al. (2010) stated that deontology has a relationship with IEA, which influences green purchasing behavior, whereas Kilbourne & Pickett (2008) did not include the variable IEA in the research and stated that environmental beliefs influenced environmental concern, which in turn influenced behavior. Trivedi et al (2018) suggested that environmental

concern did not directly influence behavior, instead it influenced IEA which influenced behavior. It should be noted that there is evidence of different kinds of constructs in the literature and therefore this research had to adopt the most common and working construct, which can be viewed on Appendix B.

It can be said with certainty that all the researches that have been included in this paper confirm the hypothesis that environmental belief had an ultimate positive relationship with green behavior, both direct and indirect and it is because the consumers have to be aware of the environmental issues and recognize them as big problems before they are going to engage in a behavior that is going to help reduce the consequences of these problems. As stated earlier, there is an incentive to rest and let others deal with the solution to the problems while the individual enjoys a free ride, but if the individual recognizes these problems as severe enough then he or she will alter his or her own behavior as well. As Mahatma Gandhi said *"be the change you wish to see in the world"* (Goodreads, 2020) and it can certainly be hoped that consumers take it upon their individual selves to alter the collective behavior.

Deontology is an interesting variable and thereby invites a lot of confusion in the scientific literature. In the research by Turkyilmaz et al (2015), the researchers noted D as a positive and significant predictor of IEA and OEA. Leonidou et al. (2010) also noted D as an independent variable for predicting IEA and OEA. It was not recognized as a variable in the study of Kilbourne & Pickett (2008) and Trivedi et al (2018) however. Though this is a not a complete review of all the literature available of the topics but it is reasonable to suggest that the place of deontology in the construct of green behavior is clear relative to the place of environmental behavior and that is the place that has been used in the construct of this research.

The construct of both IEA and OEA had an R^2 above 0.7 which suggests that a significant amount of variability in the dependent variables i.e. IEA and OEA is explained by the two independent variables in the construct i.e. Environmental Beliefs and Deontology.

Based on the information that has been discussed above, it can be claimed that the way to encourage green behavior is by improving the environmental attitude, inward more than outward, but the improve environmental attitude nevertheless which is reminding the consumers about the extent of the responsibility that they have towards the environment which includes, first and foremost, their own consumption patterns.

Furthermore, the way to encourage the sense of individual and collective responsibility is to enhance the environmental beliefs of the individuals, in that they have to be convinced of the seriousness of the environmental issues which are being faced today and understand what is the locus of control for them, and also relate taking care of the environmental issues as a deontological ethical and moral duty, in that the act of buying green products over non-green products and taking a public stance for pro-environment attitude should be treated as ethical.

9.5 Problems in the Study

The problems in the study were more apparent at the time of methodology because there was not a clear insight into the theoretical construct for green purchasing behavior. No matter the claim that there is an increase in the studies about green purchasing behavior over the recent years (Kilbourne & Pickett, 2008), there is a lack of consensus in the scientific community about the variables and how they impact one another. But the construct adopted in this study turned out to a good predictor of the variables in question, which is neatly reflected in the R^2 of the variables.

Another problem in the research was that the R^2 for IEA, which included EB and D as independent variables, was greater than 0.9. Though this is good because it means that almost all of the variability between the variable IEA has been explained by the variables EB and D, but it should also be noted that other researchers have recognized other variables which will account for the explanation of a reasonable amount of predictability of the dependent variable. Though the R^2 for OEA, which also included EB and D as independent variables, was greater than 0.7, which is not nearly as high as 90% but both of these constructs do suggest that the a fairly large portion of the variables influencing IEA and OEA have been determined and the blind side has become insignificant.

The relationship between OEA and GEB is something that was confusing in the literature as well, because some researchers noted that OEA had a positive influence on behavior (Leonidou, et al., 2010), whereas others confirmed that OEA had absolutely no impact on direct or indirect behavior (Trivedi, et al., 2018).

It could be stated that the difference between the results is because of the difference in the countries and cultures, because there might be individualistic societies where the consumers feel that they themselves are responsible for fixing the environment and collective action is not necessary or isn't something that is going to come about on its own. However, there might be collective society where consumers adopt the herd behavior and wait for someone else to initiate the process towards environmentally sustainable consumption. This is a potential reason for why there is a difference in results and the contradiction in the impact of OEA on environmental behavior of the consumers.

It should be noted however that despite these problems, the research was in line with the academic literature available on the topic and it should also be noted that majority of the

hypotheses were accepted solely because they were confirmed by empirical testing. Though there is plenty of room for improvement in the construct, as some researchers noted that the benefits of engaging in green purchasing behavior are, at best, long-term oriented (McCarty & Shrum, 2001) which is another potential motivator for attitude towards environmental issues and can be studied, but since the construct developed in this research have validated the test of significance and the relationship between majority of the variables have been confirmed as hypothesized, it is reasonable to suggest that this research, despite the problems faced in conducting it, has offered a clear perspective on the relationship between EB, D, IEA, OEA, GPB and GEB.

The hypotheses concerned with the comparison between groups were not entirely accepted because contrary to the hypothesis, men exhibiting more green purchasing behavior compared to women. However, according to the hypothesis, millennials did exhibit more green purchasing behavior compared to baby boomers.

9.6 Future Research

The debate of the constructs is not settled yet, because the R^2 is not 1 as yet, in any research and as the scientific researches evolve over the future to completely understand the entirety of the factors at play, there will still exist some differences between different cultures and civilizations and journey to the complete truth will always be incomplete. It is an insurmountable enemy but that is the beauty of scientific research that no matter the odds, the pursuit of an understanding of reality does not stop.

There are gaps in the literature that this research tried to fill, but the results of this research are of no utility to the scientific community if these results cannot be reproduced using the same constructs and the same variables. Therefore, future researchers are advised to build upon the work of this research, try to reproduce the results that have been produced here, and if there are any

difference between the results, try to figure out the reason as to why the differences arose. For this very purpose, the regression analysis, the demographics, the correlations and the mean comparison between the groups have been included in this research, so that future researchers can compare their results with those of this study and determine exactly where the differences lie.

This research has confirmed the relationship between EB, D and IEA, OEA and GPB as presented in the construct in Appendix B, but the relationship between OEA and GEB is widely confusing as some researchers recognize it as insignificant whereas others do not, as has been discussed earlier. Therefore, the research on this particular relationship is of plenty of utility to the scientific community as it is a topic that is not entirely explained by the current researches available.

Future researchers are also advised to make comparison between future demographic groups so that it can be determined that which groups will play a pivotal role in saving the environment. Furthermore, it might also be wise to determine how to best influence the groups which have been shown to be good potential target in this research, i.e. women and boomers.

It should be noted that men and millennials do currently have a higher green purchasing behavior compared to women and boomers, respectively, but it is the coefficients of IEA which predicts whether enhancing IEA will increase GPB or not. The coefficient of IEA in the case of women and boomers is higher relative to men and millennials, respectively, which is this research suggests that future researchers make it a priority to determine how to improve IEA of women and boomers so that their green purchasing behavior can be influenced for the better.

Since the R^2 of the constructs is significant, it is essential that the current study be tested in future researches because it has offered a solid based for future researchers to consider. Furthermore, since women and boomers are not the only demographic groups which need to have

their green purchasing behavior enhanced, future researchers should look into the variables which have the capacity to influence the green purchasing behavior of men, millennials and other demographics groups which were not compared in this research. This will ensure that only the most effective tactic for influencing green purchasing behavior, based on objective research, is used to alter the behavior of individuals across geographical boundaries. It is further recommended that the future researchers employ a wide array of methods, including but not limited to qualitative methods such as interviews, focus groups and experiments to ascertain the profound motivating factors behind green purchase behavior. Such methods will enhance the quality of the research produced and will be able to deliver tested strategies for influencing green purchasing behavior.

9.7 Implications and Application of Results

At the beginning of the research, it was proposed that this study will compare the different variables which impact the green purchasing behavior of consumers so that it can be determine which the most important one is and then the future researchers can determine how to best influence that variable. It should be noted that it has been figured out the Deontology plays a pivotal role in altering both the IEA and OEA, out of which IEA influences GPB the strongest.

Therefore, the suggested implications are rather simple i.e. convince the consumers that chose green products over non-green products is the righteous thing to do, because as Kilbourne & Pickett (2008) suggested that individuals do not like to be reminded that their selfish consumption behavior is the reason for the demise of the environment at a rate that is ever-increasing. Though it seems like guilt makes consumers take rational decision for the betterment of the environment and that might not be an ethically righteous action, but it is the most effective method, nevertheless.

The research can also be useful to marketers for establishing a unique brand image for a green product surrounding the idea that buying the product is better for the environment and is therefore the right thing to do. This will help the consumers develop a positive inward environmental attitude towards the product, because the deontological framework is encouraging them to make this purchase and this will positively influence the green purchase behavior and encourage the consumers to buy the product and/or enhance the brand image.

9.8 Conclusion

The research has confirmed the relationship between the variables and has suggested that Deontology is the strongest variable to influence Green Purchasing Behavior through Inward Environmental Attitude. Though Environmental beliefs is also essential and is a reasonably significant predictor of both Inward and Outward Environmental Attitude, the coefficients of Environmental Beliefs are no match for the coefficients of Deontology.

This research suggests that future research of this topic base their work on the construct developed in this research, because it is not only based on the constructs of other recognized researches, but the constructs also have an R^2 higher than 0.7 which suggests that more than 70 percent of the variability in the dependent variables is explained by the independent variables, which is a solid benchmark for a good construct. It is also suggested in this research that men are more likely to engage in Green Purchasing Behavior, but it is the women which react more strongly to Inward Environmental Attitude.

Similarly, even though millennials are more likely to engage in Green Purchasing Behavior, but it is the baby boomers which react more strongly to Inward Environmental Attitude. This is why the research suggests that women and boomers be the target of messages and communications aimed to increase Inward Environmental Attitude.

Furthermore, the research suggest finds that there is plenty of motivation to sit by and let the collective deal with the environmental consequences as Outwards Environmental Attitude did not have a significant relationship with behavior and it is to be noted that this is something that has been established by the founders of economics, who were studying the idea of free goods and the motivations of free riders. The benefits related to the environment if an individual engages in green purchasing behavior will not solely be enjoyed by the individual.

Moreover, if majority of the collective engages in green purchasing behavior, the benefits related to the environment will be reaped by all individuals, regardless of whether or not they participated in green purchasing behavior, which is why deontological messages which highlight the righteousness of engaging in environmentally-considerate behavior are essential for the betterment of the world.

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Appendix A

Consent Form

Impact of Environmentally-Friendly Business Practices on Consumer Behaviour of Various Age Groups in Ireland.

You are being asked to take part in a research study on the reasons for the connection between beliefs, attitudes and concerns about environmental issues and how it shapes consumer behaviour. In this study, you will be asked to fill a questionnaire, should you choose to be a part of this research. The questionnaire typically takes two minutes to be completely fill.

PARTICIPANTS' RIGHTS

You may decide to stop being a part of the research study at any time without explanation required from you. You have the right to ask that any data you have supplied to that point be withdrawn/destroyed. You have the right to have your questions about the procedures answered If you have any questions as a result of reading this information sheet, you should ask the researcher before the study begins.

The data I collect does not contain any personal information about you except your age, gender, qualification and years of experience. This is being done so that the researcher can administer the proper proportion of participants from each demographic group.

By signing below, you are agreeing that: (1) you have read and understood the Participant Information Sheet, (2) questions about your participation in this study have been answered satisfactorily, (3) you are aware of the potential risks (if any), and (4) you are taking part in this research study voluntarily (without coercion).

_____ _____

Participant's signature Participant's Name (Printed)

_____ _____

Student Name (Printed) Student Name signature

_____

Date

Questionnaire

Demographics:

1. Age
    a. Less than 18 years
    b. 18-25 years
    c. 26-33 years
    d. 34-41 years
    e. 42-49 years
    f. 50 years and above
2. Gender
    a. Male
    b. Female
    c. Other
3. Annual Income
    a. <37,000
    b. 37,000-40,000
    c. 40,000-43,000
    d. 43,000-49,000
    e. >49,000

Items	**Factor Loadings**
Inward environmental attitude *Kilbourne and Pickett (2008)*	
1. I am concerned about the environment.	0.82
2. I would be willing to reduce my consumption to help protect the environment.	0.77
3. I would give part of my earnings to help protect the environment.	0.70
4. I and my family recycle the things we use.	0.77
Outward Environmental Attitude *Kilbourne and Pickett (2008)*	
1. Humans are severely abusing the environment.	0.84
2. Anti-pollution laws should be enforced more strongly.	0.92
3. Major social changes are necessary to protect the natural environment.	0.87

4. Major political change is necessary to protect the natural environment.	0.68
General Environmental Behaviour *Kilbourne and Pickett (2008)*	
1. I contribute money, whenever possible, to environmental organizations.	0.63
2. I frequently buy/read magazines and listen/watch news items that have environmental issues.	0.82
3. I am actively trying to gain membership of environmental organisations.	0.83
4. I actively try to contact my political representative about any environmental issues	0.74
Deontology *Chen (2010)*	
1. I am interested in conserving the natural resources.	0.78
2. I am concerned about the environment for future generations.	0.85
3. I actively try to reduce unnecessary waste.	0.88
4. I am really concerned about the environment for my future personal convenience	0.87
Environmental Beliefs *Kilbourne and Pickett (2008)*	
1. Various types of pollutions are rising to dangerous levels	0.71
2. Some living things are being threatened with extinction	0.70
3. Continued use of chemicals in agriculture will damage the environment	0.74
4. Shortages of some important resources will occur in the near future	0.76
5. Global warming is becoming a problem	0.65
6. Ozone depletion is an environmental problem	0.65
7. The availability of clean water will become a problem in the future	
Green purchasing behaviour *Kilbourne and Pickett (2008)*	
1. I actively try to buy environmentally-friendly products over other products.	0.93
2. I buy organic food, whenever possible	0.78
3. Environmentally-friendly products match my expectations regarding the ideal product.	0.83
4. I frequently try to reduce household waste.	0.82
5. I frequently try to recycle household waste.	0.81
6. I frequently try to use products made from recycled materials.	0.71
7. I contribute money to an environmental organization	0.71
8. I subscribe to an environmental magazine	0.62
9. I am satisfied with my decision to buy environmentally-friendly products.	0.88

Appendix B

The Conceptual Model