

Consumer Reliability on their Purchase of Green Products

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<p>Abstract</p> <p>Green marketing and products have been increasingly discussed trend within the field of business. As a global issue, climate change has placed a heavy ethical burden on the consumer to take actions to mitigate it. From a marketing perspective, experts should have considered whether this burden resulted in consumers misrepresenting their purchasing of environmentally conscious - green- products.</p> <p>The objectives of the study were grounded in determining whether consumers would consistently claim to conduct environmentally friendly purchasing, as well as taking an action beyond consumption. There was also an attempt to account for cultural and age affected variables in participants responses.</p> <p>These objectives were then realized through a primary source in the form of a survey. Participants were asked to answer 12 multiple choice questions while also disclosing their age and whether they were a national of Finland.</p> <p>The results displayed clear inconsistencies in the participants stances on green products. While many claimed to support specific actions to improve environmental stands, fewer supported governmental regulation in response and even fewer had voted in the first place. Conclusions could not be drawn based on age, but nationality had an impact on participant stances.</p> <p>Marketers had to be wary of studies on the impacts of green marketing when it is not directly paired with data on purchasing behavior. Consumers had an incentive to misrepresent the extent of their green consumption, and studies conducted at different times and locations would likely not represent the reactions in the marketer's target group.</p>		
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<p>Abstrakti</p> <p>Vihreästä markkinoinnista ja tuotteista on keskusteltu yhä enemmän liiketoiminnan alalla. Globaalina kysymyksenä ilmastonmuutos on asettanut kuluttajalle raskaan eettisen taakan toimia sen lieventämiseksi. Markkinoinnin kannalta asiantuntijoiden olisi pitänyt pohtia, aiheuttiko tämä taakka vääriä tietoja ympäristöystävällisten - vihreiden tuotteiden - ostamisesta.</p> <p>Tutkimuksen tavoitteet pohjautuivat sen määrittämiseen, väittäisivätkö kuluttajat jatkuvasti tekevän ympäristöystävällisiä ostoksia ja toimivatko kulutuksen ulkopuolella. Osallistujien vastauksissa yritettiin myös ottaa huomioon kulttuuriin ja ikään vaikuttavat muuttajat. Nämä tavoitteet toteutettiin sitten ensisijaisen lähteen kautta tutkimuksen muodossa. Osallistujia pyydettiin vastaamaan 12 monivalintakysymykseen ilmoittaen samalla heidän ikänsä ja olivatko he Suomen kansalaisia.</p> <p>Tulokset osoittivat selviä epäjohtonmukaisuuksia osallistujien asenteissa vihreiden tuotteiden suhteen. Vaikka monet väittivät tukevansa erityisiä toimia ympäristöasioiden parantamiseksi, harvemmat kannattivat vastauksena valtion sääntelyä ja vielä harvemmat olivat äänestäneet. Johtopäätöksiä ei voitu tehdä iän perusteella, mutta kansallisuudella oli vaikutusta osallistujien asenteisiin.</p> <p>Markkinoijien piti olla varovainen tutkimuksissa vihreän markkinoinnin vaikutuksista, jos sitä ei suoraan liitetä ostokäyttäytymistä koskeviin tietoihin. Kuluttajilla oli kannustin harkita vihreän kulutuksensa laatua, ja eri aikoina ja eri paikoissa tehdyt tutkimukset eivät todennäköisesti edusta reaktioita markkinoijan kohderyhmässä.</p>		
Avainsanat Vihreä markkinointi, kuluttajien ostokäyttäytyminen, ilmastonmuutos, vihreät tuotteet		

1 Introduction

With even the best-case reports on climate change predicting a 2 degrees Celsius increase in the average global temperature (US Global Change Research Program, 2017), consumers as well as producers have begun to move towards sustainability in their product range. As climate change becomes more accepted in the communal consciousness, corporations have an increased incentive to shift their style of marketing onto emphasizing the environmentally friendly features of their products. However, particularly when the companies' short-term goal is to maximize revenue, the efficacy of green advertising must be considered. By determining the behavior of consumers in regards to green products, the use of advertising could be adjusted within the marketing mix in order to gain the desired result.

As such, it would be helpful to determine whether consumers are environmentally oriented when they claim to be. Since the topic of climate change is rooted in ethics, individuals may be tempted to claim to be environmentally conscious in their purchasing while not actually changing their behavior. For companies, it is important to determine whether this phenomenon exists, as any employed marketing surveys could provide misleading information about the purchase behavior of their target group.

Inspiration

The motivation for this thesis stems from marketing lectures on the relatively new phenomenon of green advertising. As a concept it seems to be a subset of the larger field of marketing, and as a result, a curiosity was developed as to its metrics. While the course largely focused on the theory and practices around green advertising, the statistics themselves were largely glossed over. This prompted me to wonder about the impact itself of this form of marketing on its consumers. Is there a bias towards a specific stance on green products, and what impact would this have on any gathered data based on the testimonials of customers.

Structurally, the thesis will first be grounded within the theoretical framework consisting of a literature review of appropriate studies. Empirical data will be gathered from a primary source, an employed survey with an intent to test internal consistency. Conclusions and a discussion will be formed from the statistical tests applied to the raw data.

1.1 Research Question and Objectives

Are consumers consistent with statements made on their environmentally conscious purchasing behavior?

I hypothesize that the respondents will overstate their environmentally conscious purchasing behavior. Statistical analysis should reveal whether respondents consistently engage in environmentally friendly purchasing habits, and whether these beliefs translate to a measurable action.

2 Literature Review

2.1 Green Advertising

The main way in which companies can then communicate their product intentions is through the packaging itself. The word 'green' has become inseparable from an association with environmental appearances. The mere usage of the color on packaging results in higher product evaluation and purchase intention (Onel & Ozcan 2018). This is a prime example of a core decision making pattern based on enforced associations being exploited by marketing companies. Green products cannot succeed by the mere virtue of their product without consideration for their brand. Although green consumers themselves may be considerate of their product purchases, the broader consumer base does not feel as responsible for climate change. They are aware of it and thus can be persuaded with a provision of a 'feel good' purchase of a product that promises to be environmentally friendly. They can be influenced more with the typical persuasive methods.

Seo and Scammon (2017) demonstrated how consumers may be affected by their color associations. The green packaging was also shown to alter the consumer's attitude about the product's environmental impact. Although color is not the only thing that consumers cue in on: the use of raw fibers (giving an "earthy" feel to the product) versus plastics and more curved product shapes (which are associated with more natural and unprocessed product) demonstrate the effective use of both tactile and geometric modalities in communicating a product's identity. This could subsequently be abused by marketers to improve a brand's environmental associations among consumers. It is certainly easier to include a green leaf on a product instead of improving the product's impact itself.

So far, the mere usage of the color has been shown to increase not only purchase intentions, but the attitudes towards the product itself. As such, its use is seemingly vital in product packaging and brand formation. However, other studies show that this may not be the exclusive effect of the color. Onel and Ozcan (2017) posit that the 'green' must be combined with supportive claims. Slogans which emphasized the effectiveness of the product along with the color, did not perform as well as slogans which emphasized the environmental effects of the product.

These results provide certain considerations as to the functional use of green in advertising. Although it improved a multitude of consumer effects, these seemed exclusive to the color itself which was able to entice these connections. Yet packaging is rarely so simplistic. Any supporting text and statements should focus on this environmental impact instead of the qualities of the products. As such, contradicting the connotation of the green color seems to remove it from the perception of the consumer.

2.2 Persuasion in Marketing

The core foundations of marketing are formed from psychological concepts. At the core of persuasive methods is Robert Cialdini's six methods, which outline

tactics for altering human behaviour in a self-serving manner. These 6 methods are reciprocity, authority, liking, consensus, consistency, and scarcity. The first of these, reciprocity, is particularly impactful method of marketing, as the act in and of itself is fundamental to the sense of community that is the touchstone of most cultures and businesses.

Cialdini's Six Persuasive Techniques

2.2.1 Reciprocity

Reciprocity occurs when an individual does a favor for another, causing the second person to feel compelled to complete a beneficial act in return. This seems to be centered around an implicit trust, wherein a persuader can convince the second person that they are placing a certain level of trust in them. 'Favors' in most societies are not viewed as acts done for a stranger; rather, they are done by families and friends. The altruism (be it real or perceived by the consumer) results in the symbolic gesture of kindness formed by an intrinsic need to return the favor (Cialdini, R., Vincent, J. E., Lewis, S. K., Catalan, J., Wheeler, D., & Darby, B. L. 1975). This behaviour can practically be witnessed everywhere that human interaction takes place, but in the scheme of customer service, is most utilized by the face of the service industry: servers. When serving tables, waiters use both charisma and perceived familiarity (e.g. providing a cup of coffee "on the house) to customers as the start of a reciprocal exchange, where the expected outcome is a higher tip. This is a good example of the act itself usually being highly symbolic; something like a cup of mass-brewed coffee are not particularly costly for a restaurant worker, so the formation of the trust is not based on the sacrifice involved with the act, but simply the act itself. Customers are also typically aware that this act is extremely common, but the feeling of belonging or being appreciated by a group of people, even if it's only the wait-staff of a restaurant, stimulates the customer's sense of self and the additional consideration tends to typically be appreciated regardless.

Within the context of green advertising, reciprocity continues to have some profound applications. Some products often advertise that a proceed of the

revenue is donated to an environmental cause, or that for every package sold the company performs some environmentally conscious act. These are valid examples of reciprocity, although in a slightly altered way. The favor itself is not performed before hand, but instead promised. By stating some way that the consumer would help real world issues by buying a particular product, an incentive is created by increasing the 'value' involved with the purchase. Just as with the restaurant example, the act itself is fundamentally symbolic in the sense of the consumer perceiving themselves as part of a larger (and arguably, more meaningful, whole). Although there is no secret in understanding that corporations would have more significant "green" impacts by lobbying for green regulations, individual consumers continue to pledge their money to multi-million dollar companies that promise environmental restoration. The perceived value of donating money to environmental laws or reform-based NGOs is not as appealing as the self-image of funding incentives to restore a lush green forest. By promising to plant a tree for every product or something similar, the brand receives a positive association in the mind of the consumer as they picture large billowing trees. The company further asserts their brand in the minds of consumers with a largely ineffectual pledge, while the consumer feels accomplished with their purchase by thinking every little bit counts.

2.2.2 Authority

The second principle, authority, is quite simple at its core. People trust the opinions of others who have a perceived authority on the subject. One of the most well known experiments demonstrating the persuasiveness of authority is Milgram (1963), in which participants complied with orders to electrocute a planted participant. While there was no electricity, participants believed that there was and applied increasing shock. This ties in closely to Bandura's social learning theory, which states that human behaviour is learned through observation, imitation, and modeling. When these consumers do not have sufficient information as to make a decision, they gather information by referring to the experiences of others. In these evaluations of experiences,

individuals who have knowledge on the topic at hand are considered valuable as sources of information.

This is often seen in advertising as celebrity branding. Although not necessarily actual experts on the product, some consumers view the endorsement of these celebrities as coming from a place of authority, or power, because they have accumulated the wealth and beauty the consumer wishes to see in themselves.

In the perspective of green marketing, this could be extremely valuable. As the practice is deeply connected to a complex global issue, most average people simply do not have all the necessary information to process as to what is 'good' and 'bad' behavior with respect to their contribution to climate change. If an expert is established and used alongside green advertising, consumers may be convinced of the particular brand's effectiveness over another's. More research needs to be done to understand what would be the most functional expert: would a traditional celebrity suffice, or would an actual researcher's words be more effective? For a green consumer, it may be that the celebrity would not be the most effective, but the general populace may be more swayed by a generic celebrity endorsement—in the past decade scientists have attempted to engage the public in meaningful brand consumption; however, "pop"-scientists remain to have the sway of trending celebrities, meaning that the future of green marketing has yet to produce the ideal "authority" for consumers.

2.2.3 Liking

Liking is a quite simple as a concept. As humans form bonds with each other, they begin to value the inputs of those with stronger bonds over those with weaker bonds. This is practically a part of a social construct between the two individuals that both feel obligated to maintain. Seither and Dutson (2007) demonstrated this in their study on compliments in hair salons. Stylists received higher tips when complimenting their customers, who felt a stronger bond with the stylist as a result of the compliments. Therefore, in those

information seeking phases, the individuals whom which a strong bond is formed with are prioritized as sources of relevant contextual information. This includes everyone that a person has some form of bond with, it is not limited to simply friends. If there is a positive association in the mind of the consumer about another individual, it will trigger more trust in their words. This is part of the reason why celebrity appeal is so effective. If a single person has to be the spokesperson or face of a product, it would make sense that it would be an individual who is most widely known. Consumers themselves do not actually know the celebrities themselves, but as they've created content that a large swath of consumer's have ingested and enjoyed, a bond of liking has been formed. This naturally is not the only factor, and is likely not the only possible response from the consumer. Most likely, different consumer's experience a balance of liking and authority differently when they view a celebrity endorsement.

In the context of green advertising, this should be relatively easy to fulfill in terms of general target group appeal. Although studies have shown that green advertising has extremely different functional consumers, differentiated as green consumers and typical ones, liking is an elicited emotional response. If a sufficient figure is found who most consumer's would like, there is a chance it will be able to target both subgroups within the target group. It is possible that green consumer's will not alter their purchase behavior as they extensively evaluate their habits, but there may be further formed subconscious connections. Although their purchase habits remain the same, there is a possibility that they become more acclimatized to the brand, connecting the liking they shared for the spokesperson with the brand itself. This may result in future changes in purchase behavior, whether as an overrule of the evaluating behavior, or simply on products where the green appeal is not as persistent.

2.2.4 Consensus

Consensus is the appeal of the majority opinion. As previously discussed with authority and liking, individuals seek out sources of information and prioritize some of them as the most useful and relevant. On a psychological level, as seen in reciprocity, consensus calls to a consumer's more basic instincts. Anderson and McGuire (1965) employed even consensus in their study to enforce belief in an idea. Participants were more resistant of opposing ideas when receiving consensus in their beliefs from peers. As humans, we have evolved as pack animals, and it is core in our nature to feel like we both belong and are accepted by "our" group. This is the power of consensus: naïve individuals will, without fail, follow the behavior of a large group of that have acted in a certain manner. For example, at hotels, one of the most effective ways of convincing guests to act in a certain manner is to claim that others are as well. If towels should be left in a specific place, a simple card along the bathroom countertop stating how a majority percent of guests place their towels in the desired location is a sufficient incentive for the individual to complete the same action. Although the individual has never met any of the hotel guests, and surely hasn't discussed their towel arrangements, a guest who "disobeys" the simple card instructions could easily be categorized as "other" and suffer the social consequences of not following the status quo. This is a powerful tool that is largely used in advertising as well, with many products making sweeping claims how a certain percent of consumers found the product helpful. Percentage figures are not necessary of course, as long as the consumer feels that there is a consensus on the topic. Many app developers incentivize users to give their product a five star rating, as well as hiring other companies to flood their reviews with disingenuous five star reviews. The intended impact is for the consumer to see the vast amount of perfect reviews, and experience that the product must then be good. Legitimate criticisms of the app do not seem as pertinent when they account for a small percentage in the sea of perfect reviews.

Consensus is an extremely useful tool in green advertising. Switching to the use of green products prompts change in consumer behavior which can be difficult to elicit. As environmental awareness has become more prominent, there is a definite advantage in 'peer pressure' that can be taken advantage of. If consumers can be made to feel that green products are the societal

standard, they're more likely to switch to them. In this sense, the best method of incorporating the consensus appeal into green marketing may not be dependent on the products themselves but the message behind it. Companies could try to further remind consumers of the need to buy green products with certain company created marketing campaigns. Conversely, they can use intimidation tactics to show the consumer the consequences of *not* using the product (i.e. brands using metals can show the impact of unrecycled plastics in the environment, companies using organic/fair trade fibers can show the impact of deforestation to build factories). Social media pages could promote specific environmentally important days, figures, and events, further establishing an expectation of green purchasing from consumers. In this regard, the most effective utilization may not simply be the use of a percentage on packaging, but in creating a greater sense of consensus. As discussed in the example of app reviews, as long as the consumer feels like there is a greater agreement on a behavior, they will change theirs to accommodate for it.

2.2.5 Consistency

The fifth principle, consistency, refers to the reliability of the source of information. Enjoying a product or finding it useful is practically a binary choice for an individual. Either they enjoyed it or they did not. As such, when consumers search for sources of information, they try to recognize how strong the conviction is toward that opinion. This concept was explored by Ziegler, Diehl, Zigon, and Fett (2004), finding that participant beliefs were more confident and explained in greater depth when there was higher consistency in that belief. If an individual has been supporter or user of a product for multiple years, their views on it are seen as consistent; they have enjoyed the product and used it as such. This advocacy falls apart when the information is coming from an individual who is not seen as consistent with their statements and actions. In this sense, their advocacy is not perceived as genuine. As the basis itself is binary, that if an individual likes a product then they will use it, if the individual does not observe this in effect they will dismiss the advocator as such. This is also why marketers who use celebrity appeal want to show the

advocate using the product in some way instead of simply showing it or talking about it. Their use of it is seen as internally consistent with that binary principle. This tactic, however, can be tumultuous, as we see big name brands dropping both celebrities and athletes (with a surprising regularity) who exhibit controversial behaviors or make statements that are counter to the identity/constructed morality of the brand. Although the consumer is aware that celebrities have been paid to use the product, the visual information that the brain receives can override that knowledge. In marketing, this tool would primarily be used in accordance with other ones, such as authority and liking. On its own it does not constitute for much efficiency.

In terms of green advertising, this could be relatively easy to accommodate. With green appeals being quite strongly fixed in factual origins, the use of researchers in an appeal to authority would be one of the obvious approaches. As studying these phenomenon is their field of expertise, it is unlikely that any researcher would not have a past that was supportive of environmental causes. In that sense, their endorsement would come with the additional benefit of having an internally consistent stance on the issue, aiding in the persuasive nature of the appeal. In this regard, it may be that celebrity endorsement would not be as effective depending on their background. If a figure would appear prominently in advertising, talking about the importance of environmental conservation while having a past that contradicts this stance, public perception of the company may be affected. Consumers would be able to directly reference a specific video or statement on social media as a basis of their hypocrisy, leading not only to a lack of trust in the message of the celebrity, but the company itself. While consumers themselves are aware of the nature of advertisements, there is like a veil that covers the logical, extremely calculated acts of the company in forming the advertisement. A celebrity's hypocrisy being pointed out in their statements would disturb this veil, acting as a reminder of the lack of actual care that the company has for environmental threats. This does not even take into consideration the effect this would have on the sales of the product itself, and the associations formed by the consumer in relation to the product that is being advertised.

2.2.6 Scarcity

Finally is the concept of scarcity, which is also used heavily in marketing. A persuader can imprint the knowledge that a particular product will not always be available, thus providing the consumer with the incentive to acquire it before it is no longer available. Aguirre-Rodriguez (2013) ran a study exploring this impact in a market setting. The findings indicated that messages of scarcity in terms of supply within ads are more effective than scarcity as a result of demand. Interestingly, the results also showcased an increased impact when the message of scarcity was vague rather than specific. In a certain sense, this ties into opportunity cost. If a product was not scarce, an individual could freely make their evaluation of whether it would benefit them in their use, but this is not the case if there's a perceived time limit. This is also done with the consumer's perception of the product's value: short-term price reductions prompt a "buy-now" response because the consumer believes that they are in some way taking advantage of the company. Thus, not only the scarcity of the product, but the product's temporary discount leads the consumer to feel both cunning and thrifty, which are traits we have deemed as valuable in modern society. At this point, the evaluation no longer only pertains to the qualities and uses of the product. Instead, there's an additional consideration, uncertainty as to losing out on the possible benefits of the product. Previously this evaluation process could be practically infinite: if an individual decides not to purchase a specific product, they can make the same evaluation later to decide if this decision should be overruled. However, when the product is scarce, the consumer must make an additional consideration of can the product have any benefits, at which point the opportunity cost come between some amount of benefit versus nothing at all. This is a particularly effective persuasive tool in the field of marketing.

In this instance, this tool may not be as appropriate in green marketing. Full green product orientation is not the standard in society yet, so making products seem scarce would have to be considerate and limited to certain instances. The first step would seemingly be to introduce green products as

an extremely accessible addition to one's lifestyle. In this regard, implementing scarcity would have to be on a minute level. A prime example could be seasonal products. Particularly with food products, green consumption consists of a greater range of vegetables and other natural edibles, which have their own seasonal patterns of growth and use. One of the most established of these is the association of pumpkins with Halloween. While pumpkins themselves are not particularly dependent on season, their use in products is greatly magnified over the holiday season. This could be further taken advantage of with green products, by creating seasonal goods either based on growing seasons or celebration customs. This would create the sense of urgency within the consumer, as they know that the particular product will not be in stores all the time. With this, the sense of scarcity is attached solely to some of the product lines instead of the greater range of green products. Marketers could thus take advantage of this persuasive tool without sacrificing consumer trust on the market of green goods itself.

2.3 Consumer Attitudes Towards Green Advertising

Bettman (1979) is one of the key case studies written about consumer attitudes towards a company and its goods. It describes the process involved in the selection process of a product from a psychological perspective. When faced with a need, consumers begin the process by searching for information. This leads into the product trial stage, where the function of the product is evaluated against the desired function set by the consumer. In general, the goal of marketing is to affect this decision-making process in a way that favors a specific brand.

Advertising itself factors into this information seeking phase and can be used to directly alter an individual's attitudes toward a brand.

There are certain facets through which advertising can impact a consumer's attitudes about a brand, as suggested by Mitchell and Olson (1981).

Traditional views before the 1980s believed that a consumer's beliefs about a product's attributes were the sole reason for their attitudes towards a brand.

This would provide an incentive for marketers to focus advertising on a product's attributes. However, studies such as Mitchell and Olson's challenged this view, leading to an increasingly modern view on the capabilities of an advert.

The findings were largely aligned with previous understandings but defied their applications. Previously, the product attribute belief index was the primary interpretation of the theory, but the research determined that the consumer's attitude about the advertisement itself also impacted their view of the brand.

2.4 Green Branding

Companies' brands are heavily dependent on their slogan. Maha and Yasser (2012) researched the topic from the point of view of telecom brands. The idea was to find out what is the green brand preference in the telecom industry in Egypt. They conducted interviews on 302 consumers in the industry. The results showed that the respondents did not pay attention to environmental slogans for the brand they preferred the most, their existing brand loyalty overruling analytical behavior.

Another research on the topic was conducted by Aibek and Zainal (2015) in Malaysia. Their research purpose was to find out how green brand dimension and green perceived value effect consumers intentions to purchase or use green products. They conducted surveys for 384 customers of three hypermarkets in Malaysia. In the survey they asked consumers if they had seen environmental slogans for a specific product and whether they recognize the meaning of them or not. The results show that almost all respondents had seen the slogans, but smaller perception had actually paid attention to them.

The effectiveness of using a slogan in company's branding is also dependent on the type of the ad where the slogan is presented. Matthes, Wonneberger, and Schmuck (2013) conducted an online experiment for 484 US consumers about the effectiveness of different types of

ads. The types were functional, emotional, combination of functional and emotional and finally simplified ad. The results revealed that emotional and the combination ad were the most effective ways to market the product. Therefore, it can be said that the slogan of the company works best in emotional and the combination types of ads. This knowledge already helps companies use slogans more effectively.

One of the considerations raised by these kinds of results is the appropriate use of green advertising. With the correct framing, companies could brand their products as environmentally friendly without making any changes to their products. A similar phenomenon is consistently observed with health benefits. Food and drink products often have a low sugar version where the difference to the original product is negligible. In a similar manner, this method could be used to tide over consumers who feel a social pressure to consume green products but are not discerning enough to evaluate their qualities.

2.5 Sustainability in Green Advertising

Concern about sustainability is changing the competitive pattern in the current markets and pushes organizations towards greener thinking. However, it looks like customers are hard to convince to buy greener products because the customer usually feels that they are not the beneficiary in the process but rather a society as a whole. For this reason, the most important issue for marketers and decision-makers nowadays is to figure out how to encourage consumers to choose the greener option.

Since consumers are hard to convince on purchasing sustainable products, many marketers are using different appeals to persuade consumers to buy them. Yang, Lu, Zhu, and Su (2015) conducted research around the topic of abstract appeal and concrete appeal affecting green consumption behavior such as purchasing green products. To clarify, when using *abstract appeal*, the company describes the product in vague way, such as “This product is environmentally friendly and has less pollution”, whereas *concrete appeal*

describes the features in a very specific and rich way, such as “This product contains 60% natural ingredients and 10% less plastic in the packaging”.

Prior studies on the subject stated that concrete appeal would be more effective than abstract appeal when advertising green products. There were also different opinions on whether the green advertising appeals more to the customer when the main beneficiary is the customer itself, or when another person or society has the bigger benefit.

The results of this study show that abstract appeal is more effective when the main beneficiary in purchasing a green product is someone other than the consumer, even society itself. Both concrete and abstract appeals are less impactful when the main beneficiary is the solely the consumer. These results are also moderated by public self-awareness. This study reveals that not only does the type of appeal affect consumer behavior, but marketers should also make sure that the advertising message matches the benefit association of the product and that public self-awareness should be present.

2.6 Perceptions of Green Products

A concern shared amongst some skeptics in marketing is that green advertising results in the consumer viewing the product as inferior to its traditional counterpart. This is based on the dilution effect, which states that when decision making, individuals will be increasingly dismissive of diagnostic information when non-diagnostic information is also present. The link from this effect to marketing itself is based on the qualities presented.

Naturally, advertising is heavily anchored in reducing information asymmetry between the consumer and the product itself. Whether it is ads, slogans, packaging, or any other venue of communication, the product's qualities are emphasized. In succession, the consumer is then able to make an informed decision about their purchase. The concern arises from the viability of environmentally friendly qualities. As they are introduced to the advertising some critics state that, due to the dilution effect, the consumer de-emphasizes

the other listed qualities in their decision making process. This stance is naturally based in the belief that environmental friendliness does not qualify as diagnostic information.

A study conducted by Grolleau, Mzoughi, and Sutan (2019) aimed to observe this phenomenon specifically. Participants were presented with two products, a pen and a dish detergent, with different groups receiving a variation of both items. Some were presented with pens or dish detergents that were advertised with environmental qualities. They were then asked to rate the functionality of the products. A comparison of the results found that participants rated both the environmental versions as well as the standard ones as being equally effective. If a dilution effect would have taken place, participants would have perceived the standard products as more effective since environmental qualities would have been categorized as nondiagnostic information. The results offer some credibility to discounting the belief that the mere use of green advertising reduces a consumer's desire to purchase a given product. Although this does not have a direct relation to the specific functionality of green marketing as some of the sections, it is important to offer counterarguments on stances that could entirely discredit the findings of the thesis. In the case that green advertising is not as effective as typical methods, the phenomenon could be entirely accounted as this dilution effect. However, human behavior is astoundingly complex and should not be credited to this one view. Any dissimilarities should be thoroughly examined in order to determine their cause, as marketers can then try to overcome these specific issues without discounting the field of green advertising entirely.

2.7 Cultural Considerations in Green Marketing

Another consideration as to the effectiveness of advertising are the different cultural impacts. The assumption in socio-cultural psychology is that humans create culture and are affected by it, leading to researchers attempting to quantify some aspects of this abstract concept. One of the most prevailing ideas is Hofstede's cultural dimensions on behaviour, proposed in 1980. He proposed a general classification of cultures as either individualistic or

collectivist, with the former emphasizing individuality and the latter family values. This divide was most traditionally observed between western and eastern countries.

As such, when attempting to observe and predict human behaviour, it should be examined whether the phenomena is limited to a specific culture. This provides insight as to whether the behaviour is emic or etic among regions, offering clues as to its cause. Behaviour which occurs strictly on an emic level may simply be born from a specific culture, while an etic level suggests that the behaviour may derive from human nature itself. As such, it is important to examine a cross-cultural study on green advertising in order to determine further characteristics of it.

Yoon, Kim, and Baek (2016) studied the response to green advertising in American and Korean participants. They were shown advertisements accompanied with environmental pledges. This is a persuasive method in which some responsibility is passed onto the recipient in an effort to increase their engagement and desire to fulfill the task. The results showed that American participants were receptive to these methods, while Korean ones were unaffected. These results were further solidified as specific to green advertising with a follow-up study that used a non-environmental pledge before the ad. Under these new conditions, the results could not be replicated.

This cross-cultural study was able to examine the impact of green advertising across a cultural dimension by using participants from an individualistic country, the United States, and a collectivist one, South Korea. The results show further incoherence as to the effectiveness of green advertising. They could be explained by differences in cultural values, or as explored above, by the type of advertisement itself. By the traditional norms of collectivism, participants should have responded positively to the persuasive method of the advert, as the importance of the greater collective is emphasized over the individual. Typically, this logic would result in the inverse effect on the individualistic culture, yet if the consumer views the effects of climate change as direct threat to themselves, they would be incentivized to prevent it. As

such, the response to green advertising does not seem dependent on culture, as the observed responses did not match existing understandings of their values.

2.8 Pricing Strategies

A vital consideration in the pricing and selling of green products is their non-green substitutes. After all, environmentally friendly products are rarely an entirely new product, but instead a variation of an existing one with qualities intended to offset negative environmental effects. When goods are near perfect substitutes of each other, consumers tend to choose the cheapest option. As a result, the pricing strategies for these goods should be examined to determine the appropriate method. If it's most profitable to price green products lower than the substitute goods, it provides opportunity for marketing methods beyond green advertising itself.

Shen, Bin, et al. (2019) examined the different approaches a company could take for the pricing of their green products and any available substitutes. Three different methods were tested to determine the most profitable scenario. These included setting the prices for both products simultaneously, and then prioritizing the pricing of either product first. The most profitable strategy in both green and non-green supply chains was to price the products sequentially, instead of simultaneously. The ineffectiveness of this method is particularly prevalent when the product substitution level is high, prompting consumers to substitute to the products of a competitor. This study raised certain considerations for companies as a result. Within a green supply chain, pricing the non-green product first would result in improved profits while still providing a reduced environmental impact. However, assuming that said green supply chain truly has a social responsibility, it should be incentivized to create a product with a low substitution level. After all, the crux of the issue stems from the consumer's ability to buy a similar product from the company with a higher environmental impact. Firms can take the immediate route of maximizing profits through sequential pricing, yet the issue itself is not being addressed. If the products themselves are functional substitutes, the

production of the original good could be drastically reduced or eliminated entirely. Pricing strategies for green products will remain prevalent, but their use by companies also provides some insight into just how committed they are to minimizing their carbon footprint.

2.9 Green Consumers

Although marketing tends to react to trends in consumer behaviour in a fast manner, green marketing has developed in a convoluted manner. Attaching positive connections to a good typically results in improved consumer attitudes, but this is not as consistent with green methods. These buyers show greater reactivity to a product, particularly when products do not meet their needs or advertising efforts are particularly vague.

One of the major studies exploring this is Shrum, McCarty, and Lowrey (2013), which analyzed the results of questionnaires by DDB Needham Life Style, an advertising agency. The results showed some of the discrepancies involved with green marketing. Consumers who were concerned about the environment did not necessarily alter their purchase behaviours, which can explain some of the inconsistencies in the effectiveness of green advertisements. That is not to say that consumers disregard green marketing itself. The results show that green-oriented customers are mindful of their purchases, thus lending consideration for different products. However, this brings up the effectiveness of the advertisements. Brand loyalty seems to rarely exist among these consumers, indicating that their purchase behaviour must be constantly enforced. As they are discerning of the products they consume, green advertising is most effective when it is factual, and avoids simple grandstanding with buzzwords.

Shrum et al. (2013) describes these consumers as opinion leaders, who have an interest towards new products, and actively monitor their consumption habits. The study suggests that as "...the green consumer appears to pay attention to detail; advertisers should do the same." The results of the study are not dismissive of green consumers as a target group, but instead reveal

them to be unaffected by traditional forms of marketing. With consideration to their marketing mix, companies can successfully penetrate this market.

3 Research Methodology

While designing a thesis, it is helpful to ground the research within a philosophical framework in order to sufficiently contextualize it. Any replications or tests of validity and reliability can then be tracked against this framework to further solidify its accuracy. Alternatively, if any flaws exist, their source can be pinpointed directly within this reference.

In terms of research methodology, the aims of the thesis are based on critical realism. As the use of green products is centered on morality, it is vital to recognize that the personal ethical belief systems of an individual may affect their perception of reality. Through the use of a particularly worded survey, an indication can be formed as to whether consumers view green goods and advertising through some moral lens. Realism itself is a philosophical approach to research which prioritizes a scientific basis to the formation of knowledge. As such, any description of reality must be independent of the human mind in order to accurately represent it.

The approach itself will be deductive in nature. It is difficult to make a definitive observation about consumer attitudes towards green products and marketing, as they are not necessarily expressed publicly. If any emotional biases exist with regards to green products, it must be assumed that participants may be apprehensive about admitting them, or are unaware of them entirely. Some of the studies and concepts discussed in the literature review give some general ideas, yet they are more indicative of human unreliability instead of any specific observations. Different consumers are more invested in green causes, and the functionality of green marketing varies greatly. As such, a deductive based approach is most appropriate to simply explore whether there are patterns of information asymmetry between consumers and green products. A specific questionnaire could then indicate whether such asymmetry could be based on ethical influences. On the other hand, one could argue that the

unreliability of consumer decision making in itself is an observation, thus prompting an inductive approach. However, it is certainly not a specific observation as it can be observed in practically every consumer. Through this general theory, the survey will prompt further observations from which a conclusion can be formed.

To gather this data for analysis, a survey will be employed to prompt consumer attitudes. This qualitative data can then be coded into quantitative data, after which it can be analyzed for patterns and reliability. This also relates back to the philosophical stance of critical realism, where simple direct observations are insufficient. While the data may appear to hold certain patterns, it is vital to test whether they're significant enough to be considered reliable or simply due to random chance. The Chi square test was chosen as an appropriate tool for measuring the correlation between responses, as the questions were crafted to be independent of each other. The opinions and stated behaviors of respondents are not inherently related, allowing for a Chi square test to be viable.

Naturally, as quantitative data is being gathered and then coded into qualitative, the research becomes multi-method and sequential in nature. While the qualitative data will be commented upon for general patterns which will then be expected to be found in the data analysis, the results will be entirely based on the reliability of the data. Yet again this relates to the critical realism aspect, where the representation of reality must be confirmed beyond the observations themselves.

The reference of time for this study will be cross-sectional as the survey will only be conducted once. This will allow for an insight into the mindsets at the date of the survey, yet it is a facet that should be studied in other cases over time as well. The awareness of climate change has been climbing rapidly, placing pressure on governments and corporations to alter their behavior accordingly. The results of surveys like this one may drastically differ if conducted even a few years in the future. As a current issue, a consumer's

views are likely to change over a short period of time, particularly as effects of climate change become increasingly unavoidable.

The design for this thesis was based on the 'research onion' created by Saunders, Lewis, and Thornhill (2007), which is based on a layered description for designing a research process.

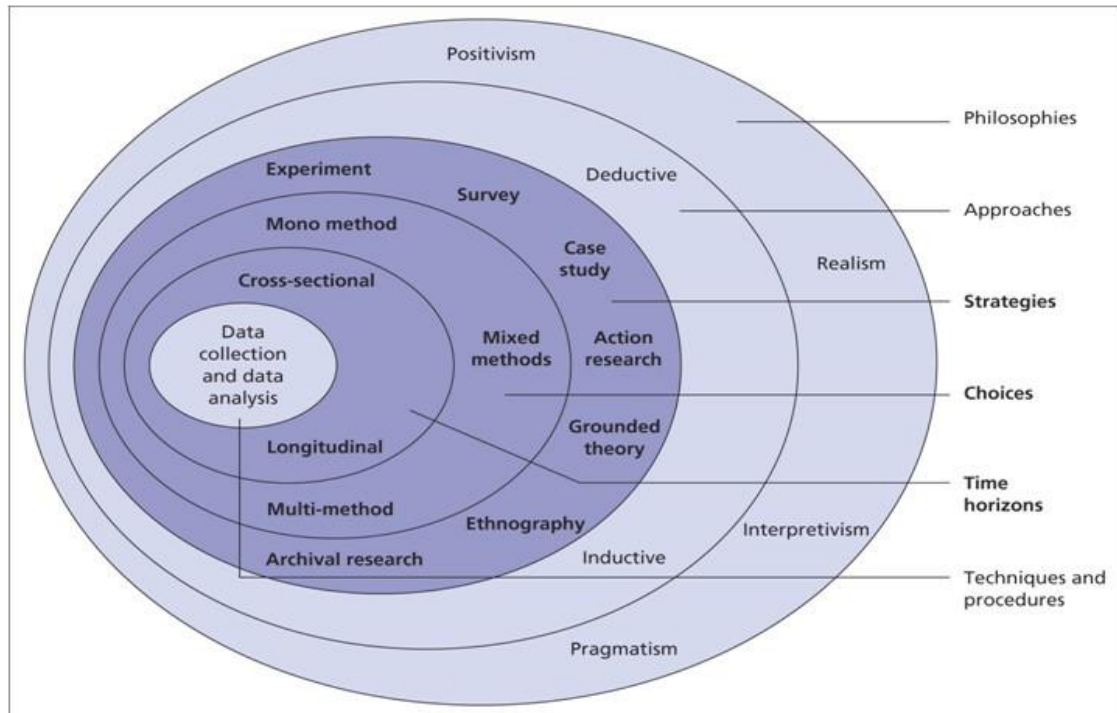


Figure 1. The research onion proposed by Saunders et al. (2007)

Primary data will be gathered based on a survey that has been conducted over the internet. Differences in participants will be largely overlooked beyond age and ethnicity. As the survey is conducted online, emic differences in the participants backgrounds may impact trends in the data. By accommodating for this possible variable, the data can be as accurate and representative as possible. Many of the questions have been based on a study conducted by Gandhi and Solanki (2012), which examined “consumer buying behavior with regards to eco-friendly products in Gujarat.”

3.1 Data Collection

Survey participants were reached through opportunity sampling, a method which invites any accessible individual to participate. It is an effective tool for finding as many participants as possible, as well as providing appropriate initial primary data. Any possible patterns noted from the survey may provide the opportunity for further research in order to determine its possible causes.

The survey itself was kept relatively short and simple, with a total of 12 questions, each with 3 possible choices. This was done to encourage responses, while keeping the minimum required amount of responses low. By reaching over 30 respondents, meaningful data analysis can be applied in the search for any patterns. Although the survey was kept brief, the questions were specifically chosen to test for internal logical consistency. These connections will be explored when examining the data itself, but to provide an example, participants were asked about green certifications and whether governments should enact greater legislation to reduce climate change. Participants who feel that there should be a standard for a green certification while disagreeing about a stronger governmental stance could be viewed as internally inconsistent. It should then be further hypothesized why these inconsistencies, if any, exist.

The survey, created with Google Forms, reached a total of 31 responses with a wide variety in the respondents ages and nationalities. The following table is a transcription of the survey.

Question	Answer
Age	
Nationality Select your nationality. Specifying the country would be helpful, but is not required.	Finnish
	Foreign
	Other (An option to include the respondent's nationality)
1. Do you purchase products labeled as 'green' at the store	Yes
	No

'Green' in every question in this survey refer to any claims the product makes about its environmental impact.	Maybe sometimes
2. Do you try to change your purchasing to lessen your environmental impact	Yes
	No
3. Have you voted in the past election This refers to the previous election for a public office in your respective country	Yes
	No
4. Are green products true to their environmental claims	Yes
	No
	Sometimes
5. Purchasing green products is the most an individual can do to combat climate change	Agree
	Disagree
6. The government should actively promote the manufacture and marketing of green products	Agree
	Disagree
	Neutral
7. I read the product descriptions of green products to examine their environmental impact	Always
	Sometimes
	Never
8. When buying green products, I compare their price to a non-green substitute	Always
	Sometimes
	Never
9. Buying green products feels good; I'm contributing to the wellbeing of the planet	Agree
	Disagree
10. Should green products have a certification that show their environmental impact	Yes
	No
11. Are green products sufficiently available at stores	Yes
	No
	Sometimes
12. Do you bring your own bag for groceries	Whenever possible
	Sometimes
	Never

Table 1. A transcribed version of the employed survey

4 Results

4.1 Initial Data

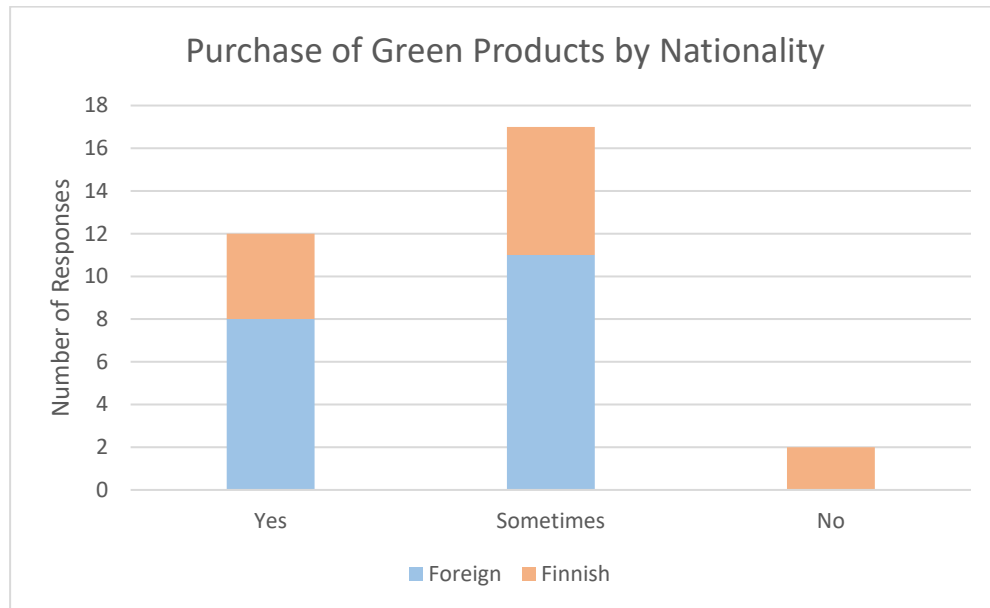


Figure 2. Purchase of Green Products by Nationality

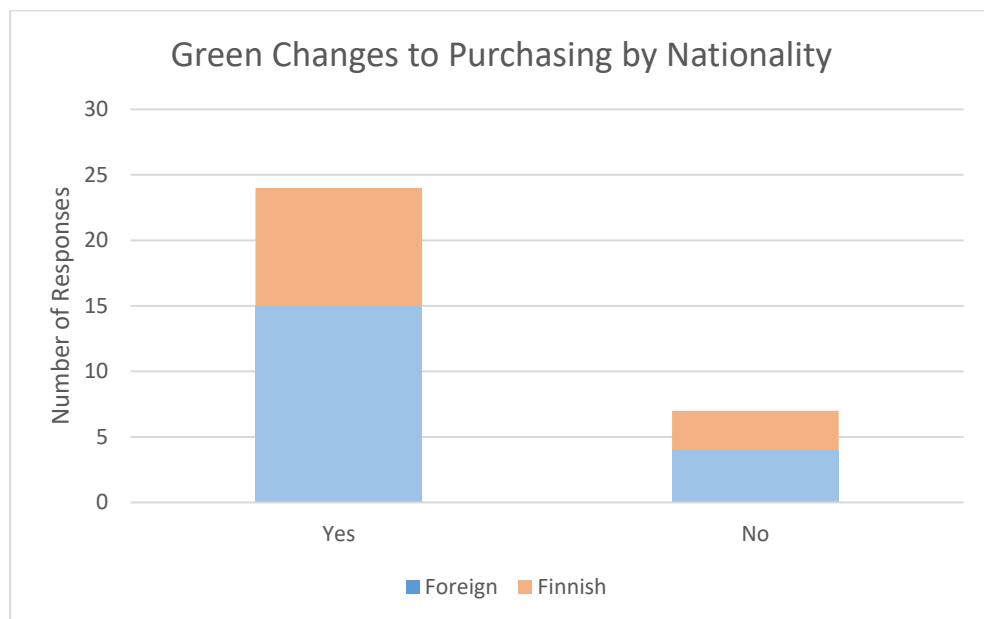


Figure 3. Green Changes to Purchasing by Nationality

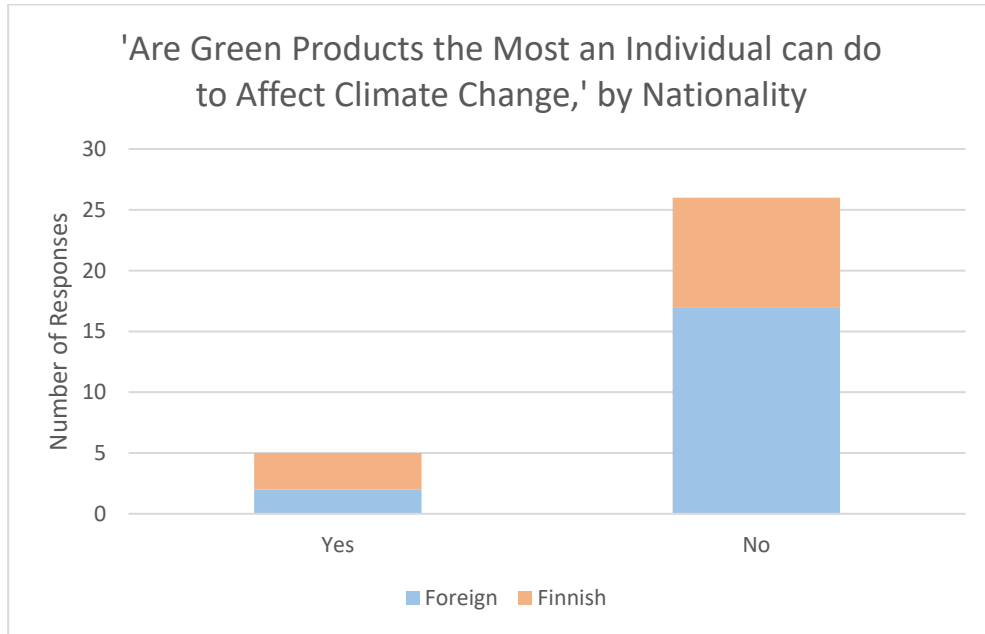


Figure 4. 'Are Green Products the Most an Individual can do to Affect Climate Change,' by Nationality

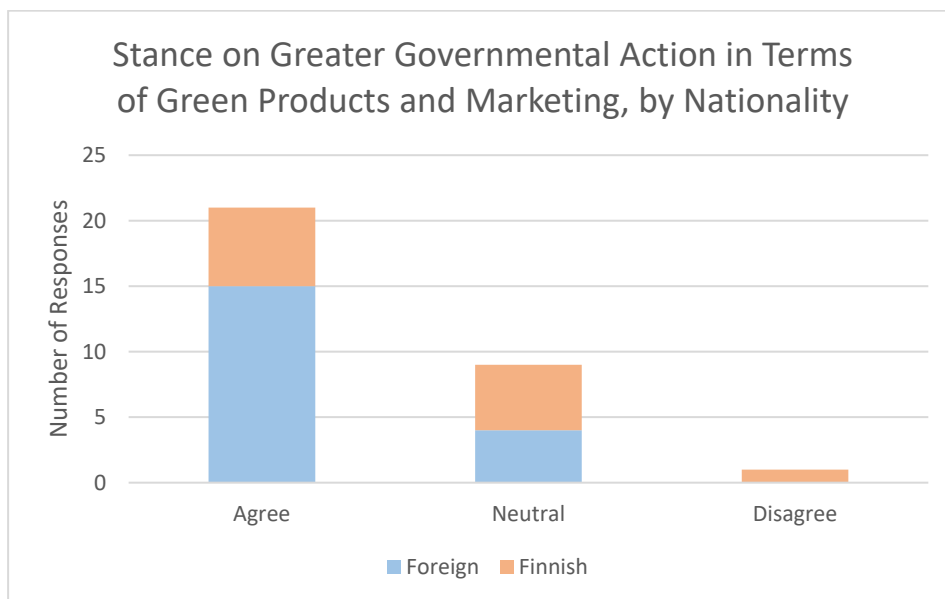


Figure 5. Stance on Greater Governmental Action in Terms of Green Products and Marketing, by Nationality

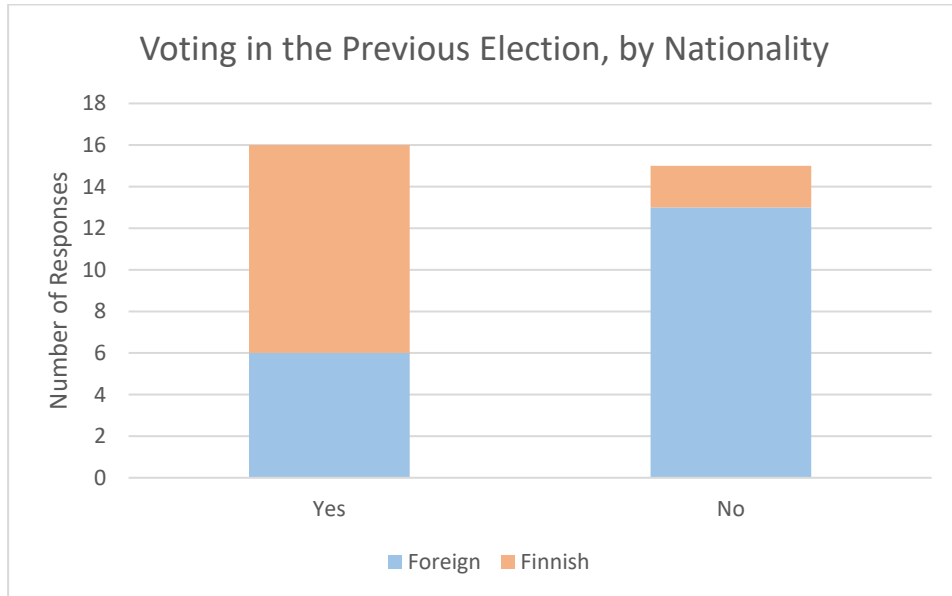


Figure 6. Voting in the Previous Election, by Nationality

	χ^2 Value	p-value	Standardized Residuals	
<i>Have you voted in the past election?</i>	4.94	0.084	Vote	Vote
			↑ gov	↑ gov
			2.18	-2.18
<i>Purchasing green products is the most an individual can do to combat climate change</i>	0.49	0.782	Irrelevant	
<i>Should green products have a certification that show their environmental impact?</i>	13.20	0.001	Certificate	Certificate
			↑ gov	↑ gov
			-2.64	2.65
<i>Are green products sufficiently available at stores?</i>	5.95	0.203	Irrelevant	

Table 2. Chi square tests on answers related to question 6

	χ^2 Value	p-value
<i>Are green products true to their environmental claims? / Should green products have a certification that show their environmental impact</i>	4.23	0.12
<i>Are green products true to their environmental claims? / I read the product descriptions of green products to examine their environmental impact</i>	5.41	0.25
<i>Purchasing green products is the most an individual can do to combat climate change / Have you voted in the past election?</i>	0.01	0.94
<i>Should green products have a certification that show their environmental impact? / Have you voted in the past election?</i>	<0.001	1
<i>Buying green products feels good; I'm contributing to the wellbeing of the planet / I read the product descriptions of green products to examine their environmental impact</i>	3.94	0.14

Table 3. Chi square tests on answers

4.2 Age and nationality

Participants ages and nationalities were collected to determine if responses could be affected by other variables too. However, as the sampling method did not reach a sufficient spread in the ages of the participants, any reliable conclusions cannot be drawn from it.

Spread of Participant Ages

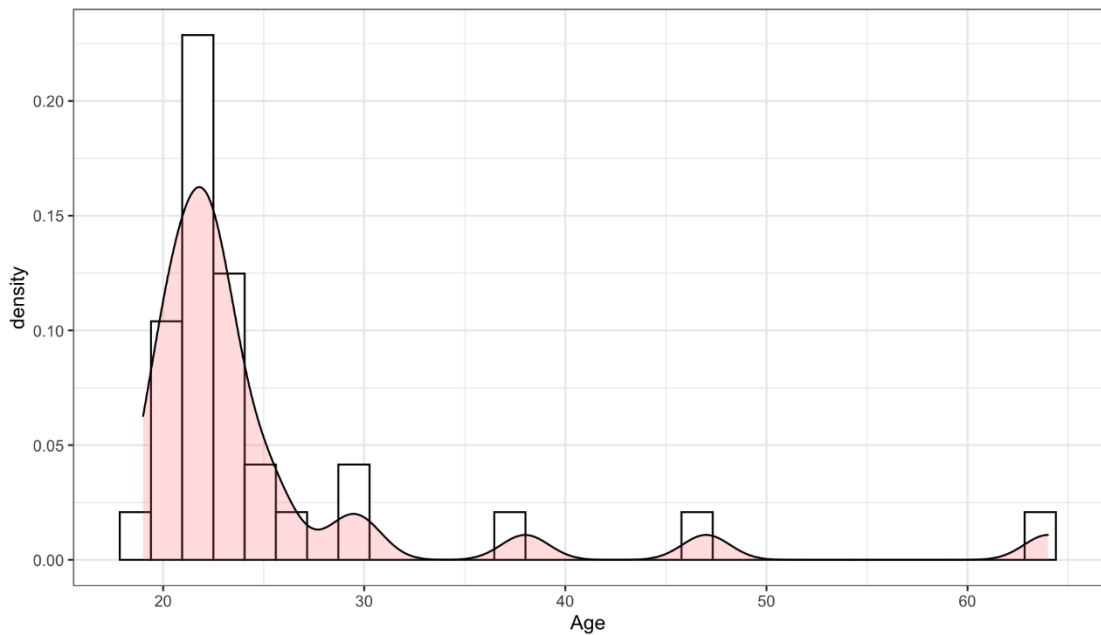


Figure 7. Spread of Participant Ages

Figure 7 visualizes the central tendency in responses in terms of age. The higher age groups are clear outliers, and as such are not reliable indicators of overall patterns.

Nationality on the other hand produced some discrepancies. When looking at figures 2-6, the ratio of Finnish to foreign respondents must be accounted for. There was an approximate 1:2 ratio, or one Finnish respondent to every two foreign ones. As such, the same ratio is expected to be observed in the bar graphs instead of an even split.

The first two graphs (2 and 3) display this expected ratio, indicating that nationality is not a factor in how consumers view green products. Finnish and foreign respondents bought green products and made changes to their purchasing habits at similar rates. However, figure 4 is where a change in this ratio begins to show. Finnish respondents were more likely to believe purchasing green products to be the most an individual can do to combat climate change. The difference between the 'yes' answers is not particularly

notable, but it begins to hint at the possible impact that an individual's background can have on their views of green products.

In addition, figure 5 exhibits similar patterns. Just as Finnish respondents were more likely to believe in individual change to improve the climate, they were not particularly in favor of increasing governmental action. With more than half the neutral stances stemming from Finnish respondents, it seems they do not feel as strongly that systematic change is required to minimize the effects of climate change.

It is in figure 6 however where the starkest contrast could be observed. By a rather sizeable margin, foreign respondents were less likely to have voted in a previous election in their country. As such, a surprising contrast presents itself. While foreign respondents were more likely to have strong opinions widescale climate change action, they were notably less likely to have voted than Finnish participants. This presents a curious dilemma; why are the respondents who feel the strongest about climate change action the least likely to have even voted in the first place?

4.3 Inconsistencies in answers

To determine if candidates were internally consistent with their answers, some of the pairs of questions are strongly related in terms of message. They often present a problem, while another question offers a potential solution for it. Before even conducting any statistical analysis, it can be noted how clearly some of these inconsistencies exist. While over 90% of respondents felt that green products should have some form of certification of authenticity, only 67.7% felt that the government should have an increased role in such actions. Furthermore, an even smaller portion of 51.6% of participants even voted in their last election. Understanding the causes of these differences would be vital in forming an accurate representation of the general consumer mindset.

The statistic test chosen to interpret this data is the Pearson's Chi square test, which would ideally note if there are any correlations with the answering patterns of the consumers. Primarily, questions were tested against the 6th one, which asked whether the government should have an increased role in regard to green products. Referring to the survey above, the answers to questions three, five, ten, and eleven were calculated with a chi square test in opposition to question six.

5 Discussion

5.1 Age and Nationality

Voting itself is an extremely complex topic, and the answer to what makes people vote in the first place is not solely based on motivation. Countries have their own unique legislations, which often influences an individual's ability to vote. The data may simply be an indication that it is exceptionally easy to vote in Finland, while that may not be the case abroad. If this is not the case however, there is clear cognitive dissonance on display. The implication of this would be that beliefs on environmental action are emic in nature, varying with each country. As such, companies aiming to penetrate a market with green marketing should not rely on studies conducted abroad, as the target group behavior may greatly vary by region. In addition, any surveys intended to gauge purchasing should be strongly cross-referenced with data on actual consumer behavior. As evidenced above, while respondents claimed to be environmentally conscious in their behavior, this did not translate to a corresponding action. It should be noted here that the statements on purchasing green products are not provided the same credence as the voting question. As beliefs on climate change are heavily entrenched in ethics, the assumption is that consumers may claim to be more invested in the issue than they actually are. Just as they may not claim to be against environmental action, they would not truly present their own purchasing behavior.

5.2 Inconsistencies in Answers

The chi square test for the respondent's voting versus their belief in governmental action (Questions 3 and 6) had some abnormal results. While the p-value was 0.08 and thus not significant enough to be considered related, the residuals reveal more information. Using the standardized residuals, the responses of individuals who believed in greater government action were represented at wildly different rates (table 2). People who did vote were underrepresented, while people who didn't were overrepresented. This would not occur if the responses to the two questions were simply randomly spread. Even though participants seemed to believe that government action was required, they clearly did not feel sufficiently incentivized to vote in the first place. While the survey did not prompt respondents on their voting habits, the lack of voting is an indication of sufficient comfort within the current system. It is meant to display the respondent's determination to act on their beliefs. That is to say, any type of change in government action would not occur without voting in the first place.

The other figure in table 2 with residuals greater than 2 or -2 is in regards to the question on green product certification. The p-value itself shows an extremely strong correlation in the responses to the two questions. Respondents overwhelmingly wished for greater government control and a standardized certification for the environmental effects of supposedly green products. The correlation is so strong that the residuals mark these two responses as notably overrepresented in the data set. This phenomenon seems to build on the observations from the previous questions. Respondents are strongly in favor of concrete measures to be taken in regards to green products and marketing. Yet these beliefs are immediately contrasted by the actual voting tendencies themselves. It seems that while there is clear recognition and support of actions which would reduce environmental harm, these beliefs are not sufficiently actionable for a sizable portion of consumers.

The other two questions on the table are more typical. Their p-values are not low enough for a correlation in the answers of the respondents. While a

majority in particular disagreed that purchasing green products is the most one can do against climate change, these beliefs did not sufficiently extend to a belief for greater government action. These values seem to further reinforce the previously made observations about the consumer discrepancy between personal beliefs and actions.

On table 3, it can be immediately noted that no two questions had a low enough p-value to be sufficiently correlated. In fact, the highest p-values are the ones associated with the voting question, which is to be expected as its rate of yes answers was particularly low. This becomes another piece of supporting evidence to display how the consumer beliefs are not being translated to any kind of voting. As there is such a consistent record of disinterest in taking beneficial actions toward environmentally conscious products, firms do not have to make any drastic strides in providing genuinely green goods.

In contrast, while the other questions on the table are not sufficiently connected, their p-values are still significantly lower than the ones involved with the voting question. This has two implications. Primarily it shows the largest disconnect comes from an association with voting; while respondents believed that greater action was required, they did not perform the corresponding action. On the other hand, lower, as well as similar p-values associated with the ideological questions denote consistency. Beliefs and statements related to green marketing and products were related more often than in comparison to voting. While it cannot be stated that their answering pattern is sufficiently related, the stark contrast in p-values tells a story of its own. While consumers claimed to be generally environmentally conscious, nearly half did not take a measured action in accordance.

5.3 Limitations and Future Research

To account for the possibility of legislation affecting a respondents ability to vote, any replications of this study should ask the respondents for their specific nationality. A question should also be added asking whether the

respondent thinks it is easy to vote in their country. With a much larger sample, data analysis should reveal whether respondents from specific countries voted at lower rates. This would determine whether the phenomenon displayed in graph 5 was solely the result of differences in regulation.

Convenience sampling also resulted in a strong bias in terms of age group. Participants aged higher than in the mid-twenties were clear outliers, and couldn't be used to state trends specific to age. Replications could account for this with either a much larger sample, or a different sampling method to reach participants of different ages. Even snowball sampling would likely produce a greater spread, as respondents could encourage their family to participate.

The research could also be formatted to be longitudinal instead, which could be used to predict future trends. The results of this study would likely be inaccurate within a few years, as awareness and impacts of climate change become increasingly unavoidable. As public perception changes, consumer attitudes are likely to follow. While replications in the future would be vital, tracking these changes over time is just as insightful. With such an approach, additions could be made to the survey to probe variables such as consumer willingness to change their green purchasing. These would then provide information on the trends of green purchasing, as well as consumers perceptions.

6 Conclusion

The study resulted in the following findings. Nationality seems to be a clear factor influencing the views and behaviors of consumers. While respondents seemed to have similar stances on their purchasing habits (figures 2 and 3), their nationality seemed to affect their views on climate change response (figures 4 and 5). In addition, a particularly notable discrepancy existed in the voting habits of respondents. Foreign respondents were less likely to have voted in the previous election (figure 6), even though they had stronger views on increased action. These findings begin to form a pattern of disconnect

between a respondent's views on green products and an expected action taken in response. However, while cultural differences exist in views towards climate change, similar speculations cannot be reliably made from figure 6 due to the vast quantity of factors affecting voting under differing legislations.

The results of the chi square tests quantified this pattern of disconnect, displaying a lack of consistency between respondent's views and their actions. This calls into question consumer reliability with any statements made of purchasing behavior regarding green products.

6.1 Managerial Implications

Companies should be skeptical of analyses on green marketing if they do not include statistics of consumer behavior, as testimonials may overrepresent green purchasing. Even accounting for this, they should be wary of studies conducted abroad as views on the market of green products seem to be affected by culture. It may be impossible to replicate such market data on target groups of different cultural backgrounds. In addition, consideration should be lent to the time period in which the study was conducted, as ones from even ten years ago may drastically misrepresent current markets.

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