

**Masterlehrgang der FH Wien der WKW
MSc Digitale Kommunikation und Marketing**

**Getting Too Green:
An Experimental Study About the Effects of Environmental Claims on
Consumers' Reactance and Purchase Intention in Advertising**

**Angestrebter akademischer Grad:
Master of Science MSc**

**Verfasst von: Astrid Koger
Matrikelnummer: 01351511
Abschlussjahr: 2022
Betreut von: MSc Simon Stiebellehner
Lehrgangsort: Wien
Lehrgangstart: WS 2020**

Ich versichere hiermit,

- diese Arbeit selbständig verfasst, keine anderen als die angegebenen Quellen und Hilfsmittel benutzt und mich auch sonst keiner unerlaubten Hilfe bedient zu haben,
- diese Arbeit bisher weder im In- noch Ausland in irgendeiner Form als Prüfungsarbeit vorgelegt zu haben,
- die Übereinstimmung dieser Arbeit mit jener Version, die der Betreuung vorgelegt und zur Plagiatsprüfung hochgeladen wurde,
- mit der Veröffentlichung dieser Arbeit durch die Bibliothek der FH Wien der WKW einverstanden zu sein, die auch im Fall einer Sperre nach Ablauf der genehmigten Frist erfolgt.

Ort, Datum

Unterschrift Verfasser*in

Ich stimme der Veröffentlichung samt Upload der elektronischen Version meiner Masterarbeit durch die Bibliothek der FH Wien der WKW in deren Online-Katalog zu. Im Fall einer Sperre der Masterarbeit erfolgt die Veröffentlichung samt Upload erst nach Ablauf der genehmigten Sperrfrist. Diese Zustimmungserklärung kann ich jederzeit schriftlich widerrufen.

Ort, Datum

Unterschrift Verfasser*in

Acknowledgments

First of all, thank you to my thesis adviser MSc Simon Stiebellehner for all the assistance he provided me in this project. I would not have gotten this far without your expertise and many helpful answers to my many many e-mails.

Thank you to my parents as well, thank you Mama for listening to all my worries and encouraging me to not give up and believe in myself, and thank you Papa for your support, advice, and help with proofreading. Thanks to both of you for financing my master's study program at FHWien der WKW and supporting me to become a more educated young professional. Not everyone is lucky enough to have caring parents like you. Knowing that I can always rely on you makes life as a young adult much easier and more relaxed in these times. I am grateful to have you in my life.

A big thank you to all my loyal friends who are always there for me in good and bad times. I won't mention any names here - you know who you are. I am eternally grateful for your immense emotional support no matter what I'm going through. You are a blessing!

I also want to thank my project group. Starting to study in the middle of corona times was bound to make you feel lonely from the very start. That was never the case with Derya, Jasmin, Mario, and Susi being there since the second semester. Without you, I would probably have dropped out sooner or later. Thank you for your project contributions, kindness, and empathy these past two years. I couldn't have asked for a more supportive and fun group to go through this together. We've mastered the chaos and lots of last-minute deadlines together.

Thanks to my workmates as well who motivated and supported me by cheering me on especially in the final days when the encouragement was much needed. The GIFs made me do it!

Another thank you goes to all those who participated in the online questionnaire and made the experimental study possible. Your karma will thank you one day.

I know he can't read this but also a thank you to Filou who was always on duty as an emotional support dog. And last but not least, thanks to Tobi, who was there for me all along, even though he caused a lot of turbulence and drama during the final months of my studies, which almost led to having postponed my graduation for a year.

I couldn't have done it without you all. Thank you!

Abstract

Consumers are becoming more environmentally conscious and the demand for sustainable products has increased significantly over the last decade as concern for the environment is growing. Green marketing with environmental advertising is on the rise, but consumers are also increasingly confronted with greenwashing and misleading environmental claims. The promotion of sustainable products using environmental claims is one element of green marketing. Greenwashing is the misleading use of environmental claims in advertising. This study aims to examine how environmental claims affect consumers' reactance and purchase intention. Based on a review of the literature on green marketing, greenwashing, consumer behaviour, and the theory of psychological reactance, an online survey was conducted which was designed as an experimental study with a randomized controlled trial to test the proposed hypotheses. As an intervention, an environmental claim was introduced. Respondents were grouped by chance and randomly divided into two groups. Analysis of the results demonstrated that environmental claims trigger psychological reactance if consumers do not believe the message is credible. On this basis, it is recommended that companies consider credibility as a key factor in conceptualizing and communicating their campaigns. This work offers theoretical and practical insights into what green marketers need to consider to successfully make use of environmental claims in advertisements.

Abstract

Die Konsumenten werden immer umweltbewusster und die Nachfrage nach nachhaltigen Produkten hat in den letzten zehn Jahren mit der wachsenden Sorge um die Umwelt erheblich zugenommen. Grünes Marketing mit umweltbezogener Werbung ist auf dem Vormarsch, aber die Verbraucher werden auch zunehmend mit Greenwashing und irreführenden Umweltaussagen konfrontiert. Die Werbung für nachhaltige Produkte mit Umweltaussagen ist ein Element des grünen Marketings. Greenwashing ist die irreführende Verwendung von Umweltaussagen zu Marketingzwecken. Ziel dieser Studie ist es, herauszufinden, ob Umweltaussagen in der Werbung Reaktanz auslösen und wie die Kaufabsicht der Konsumenten dadurch beeinflusst wird. Auf der Grundlage der Literaturrecherche über grünes Marketing, Greenwashing, Verbraucherverhalten und der Theorie der psychologischen Reaktanz wurde eine Online-Umfrage durchgeführt, die als experimentelle Studie mit einem randomisierten kontrollierten Versuch konzipiert war, um die aufgestellten Hypothesen zu testen. Als Intervention wurde eine Umweltaussage eingeführt. Die Befragten wurden nach dem Zufallsprinzip in zwei Gruppen eingeteilt. Die Analyse der Ergebnisse zeigte, dass Umweltaussagen psychologische Reaktanz auslösen, wenn die Verbraucher die Botschaft nicht für glaubwürdig halten. Auf dieser Grundlage wird den Unternehmen empfohlen, Glaubwürdigkeit als Schlüsselfaktor bei der Konzeption und Kommunikation ihrer Werbekampagnen zu berücksichtigen. Diese Arbeit bietet theoretische und praktische Einblicke in die Art und Weise, wie Marketingverantwortliche Umweltaussagen in der Werbung erfolgreich einsetzen können.

Table of Contents

| | |
|---------------------------------------|-----|
| Table of Figures..... | III |
| List of Tables..... | V |
| 1 Introduction..... | 1 |
| 1.1 Problem Definition..... | 1 |
| 1.2 Objective Target..... | 2 |
| 1.3 Research Questions..... | 3 |
| 1.4 Methodological Approach..... | 3 |
| 1.5 Thesis Structure..... | 4 |
| 2 Green Marketing..... | 6 |
| 2.1 Definition..... | 6 |
| 2.2 Marketing Mix..... | 11 |
| 2.2.1 Product..... | 11 |
| 2.2.2 Price..... | 13 |
| 2.2.3 Place..... | 13 |
| 2.2.4 Promotion..... | 14 |
| 2.3 Greenwashing..... | 15 |
| 3 Consumer Behavior..... | 21 |
| 3.1 Green Consumerism..... | 21 |
| 3.2 Purchase Intention..... | 26 |
| 3.3 Psychological Reactance..... | 28 |
| 4 Theoretical Research Questions..... | 33 |
| 5 Experimental Study..... | 38 |
| 5.1 Research Design..... | 38 |
| 5.1.1 Operationalization..... | 38 |
| 5.1.2 Method Selection..... | 42 |
| 5.1.3 Sample Selection..... | 45 |

| | |
|--------------------------------------|----|
| 5.2 Presentation of Results..... | 46 |
| 6 Empirical Research Questions | 67 |
| 7 Conclusion | 72 |
| 7.1 Resume..... | 72 |
| 7.2 Limitation..... | 74 |
| 7.3 Outlook..... | 75 |
| 8 List of Literature | 78 |
| 9 Appendix..... | 84 |

Table of Figures

| | |
|---|----|
| <i>Figure 2-1. Shades of Greenwashing (Szabo and Webster, 2021, p.734).....</i> | 18 |
| <i>Figure 3-1. Consumer Decision Making Model (Schiffman, O’Cass, Paladino & Carlson, 2014, p. 24).....</i> | 23 |
| <i>Figure 3-2. Four types of buying behaviour based on Assael (Zackariasson & Dymek, 2016, p. 21).....</i> | 24 |
| <i>Figure 3-3. Multi-level factor model of green consumer behaviour (Sachdeva et al., 2015, p. 61).....</i> | 25 |
| <i>Figure 3-4. Reactance Theory (Mühlberger & Jonas, 2019)</i> | 29 |
| <i>Figure 4-1. Green Marketing Pyramid based on Grimm & Maschlinger (2021, p. 287).....</i> | 35 |
| <i>Figure 5-1. The procedure of the empirical study based on Berger and Grabner (2016, p. 112)</i> | 38 |
| <i>Figure 5-2. Graphic advertisement with environmental claim.....</i> | 43 |
| <i>Figure 5-3. Graphic advertisement without environmental claim</i> | 43 |
| <i>Figure 5-4. Results Question 1 Experimental Group (n=103).....</i> | 47 |
| <i>Figure 5-5. Results Question 1 Control Group (n=107)</i> | 47 |
| <i>Figure 5-6. Results Question 2 Experimental Group (n=103).....</i> | 48 |
| <i>Figure 5-7. Results Question 2 Control Group (n=107)</i> | 48 |
| <i>Figure 5-8. Results Question 3 Experimental Group (n=103).....</i> | 49 |
| <i>Figure 5-9. Results Question 3 Control Group (n=107)</i> | 49 |
| <i>Figure 5-10. Results Question 4 Experimental Group (n=103).....</i> | 50 |
| <i>Figure 5-11. Results Question 4 Control Group (n=107)</i> | 50 |
| <i>Figure 5-12. Results Question 5 Experimental Group (n=103).....</i> | 51 |
| <i>Figure 5-13. Results Question 5 Control Group (n=107)</i> | 51 |
| <i>Figure 5-14. Results Question 6 Experimental Group (n=103).....</i> | 52 |
| <i>Figure 5-15. Results Question 6 Control Group (n=107)</i> | 52 |
| <i>Figure 5-16. Results Question 7 Experimental Group (n=103).....</i> | 53 |
| <i>Figure 5-17. Results Question 7 Control Group (n=107)</i> | 53 |
| <i>Figure 5-18. Results Question 8 Experimental Group (n=103).....</i> | 54 |
| <i>Figure 5-19. Results Question 8 Control Group (n=107)</i> | 54 |
| <i>Figure 5-20. Results Question 9 Experimental Group (n=103).....</i> | 55 |
| <i>Figure 5-21. Results Question 9 Control Group (n=107)</i> | 55 |
| <i>Figure 5-22. Group Statistics for Consumer Reactance.....</i> | 57 |

| | |
|--|----|
| <i>Figure 5-23. Independent Samples Test</i> | 58 |
| <i>Figure 5-24. Frequency Data Experimental Group Consumer Reactance</i> | 58 |
| <i>Figure 5-26. Frequency Data Control Group Consumer Reactance.....</i> | 59 |
| <i>Figure 5-27. Frequency Data Experimental Group Purchase Intention</i> | 59 |
| <i>Figure 5-28. Frequency Data Control Group Purchase Intention.....</i> | 60 |
| <i>Figure 5-29. Group Statistics for Trustworthiness of Environmental Claims.....</i> | 62 |
| <i>Figure 5-30. Frequency Data Experimental Group Trustworthiness Environmental Claims .</i> | 62 |
| <i>Figure 5-31. Frequency Data Control Group Trustworthiness of Environmental Claims</i> | 63 |
| <i>Figure 5-32. Frequency Data Experimental Group Further Resources</i> | 64 |
| <i>Figure 5-33. Frequency Data Control Group Further Resources</i> | 65 |

List of Tables

| | |
|---|----|
| <i>Table 1.</i> Evolution of green marketing based on Kotler et al. (2017) marketing versioning (Grimm & Malschinger, 2021, p.20)..... | 7 |
| <i>Table 2.</i> Overview of the theory of psychological reactance (Raab et al., 2010a, p. 70)..... | 30 |
| <i>Table 3.</i> Effect of communication depending on the intensity of influence and type of communication effect (Raab et al., 2010a, p. 73)..... | 32 |
| <i>Table 4.</i> Overview variables of the experimental study | 41 |
| <i>Table 5.</i> Summary of sample statistics | 46 |
| <i>Table 6.</i> Overview results of the tested hypotheses..... | 66 |

1 Introduction

1.1 Problem Definition

Green marketing has become a part of marketing strategies to entice the attention of consumers who are environmentally conscious (Grant, 2007). Consumers are increasingly aware of environmental problems and the demand for green products has increased significantly over the years (Caldas, Veiga-Neto, Guimarães, Castro & Pereira, 2021, p. 1). Therefore, green marketing became an important method for companies to achieve a competitive advantage (Zhang, Li, Cao & Huang, 2018, p. 740). However, green marketing that is not based on concrete business practices is more likely to be recognized by consumers as greenwashing. Misleading environmental claims as part of the greenwashing phenomenon are also on the rise. Effective climate change communication that can bring about a change in consumer behaviour depends on the message motivating rather than overwhelming consumers and avoiding any impression of greenwashing (Peattie, Peattie & Ponting, 2009).

A successful green advertising campaign should include an unambiguous, transparent, and comprehensible environmental claim to attract consumers (Ankit & Mayur, 2013, p. 16). Author Furlow (2010) argued that companies often make claims to attract green consumers that sound sustainable but are vague and sometimes even made-up, which causes them to question corporate honesty. Firms have become careful with launching green communication campaigns, as they are afraid of being accused of greenwashing (Peattie & Crane, 2005, pp. 357–358).

“The concern over greenwashing is not only that it mislead consumers, but also that if unscrupulous marketers continue to claim to be environmentally friendly, then companies true to their environmental mission lose their competitive edge“ (Furlow, 2010).

Websites such as Greenwashingindex.com demonstrate the massive increase in green claims in recent decades and show that environmental disinformation and greenwashing have become so widespread and worrying for consumers (Furlow, 2010). In this context, Sharma (2021, p. 1217) identified lack of environmental knowledge, price, perceived risks, company image, trust, and

willingness to pay as barriers that create a gap between consumer attitudes and actual purchasing behaviour towards green products.

The rising cases of greenwashing and increased demand for information and transparency between consumers and companies' business practices indicate that some consumers show reactance against strategical instruments of green marketing. However, green marketing has widely neglected reactance theory.

This thesis with the title “Getting too green: An Experimental Study About the Effects of Environmental Claims on Consumers' Reactance and Purchase Intention in Advertising” attempts to close this gap.

1.2 Objective Target

This thesis aims to examine the effects of a green marketing strategy and its impact on consumer behaviour. The goal is to understand how environmental claims influence consumers' purchase intention and to what extent they could lead to psychological reactance.

Companies use green marketing as a tool to position their B2C business as sustainable and promote their environmentally friendly intentions of operating their business while taking the risk of being accused of greenwashing and losing consumers' trust. There is a fine line between credible green marketing and obvious greenwashing. This thesis explores how environmental claims in advertisements influence consumers' reactance and purchase intention.

The research addresses the effect of the absence or presence of environmental claims as part of a green marketing strategy on consumers' reactance and purchase intention. It will be investigated if green marketing advertising material can eventually backfire. It could lead to green marketing reactance, which is psychological resistance to assumed overdone and inauthentic green marketed products and causes consumers to believe it's greenwashing.

The goal is to offer theoretical and practical insights into how companies can improve their green marketing efforts – in particular their advertising material – in order to optimise consumers' responses to environmental claims by avoiding triggering reactance and increasing purchase intention.

1.3 Research Questions

Against this backdrop, this master's thesis is intending to answer the following specific research question:

What impact do environmental claims have on consumers' reactance and purchase intention?

To narrow down the main research question even further, the following theoretical and empirical sub-research questions will be answered in the master's thesis:

Which factors influence consumers' differentiation between green marketing and greenwashing?

Which psychological aspects of consumers must be considered when using an environmental claim in advertisements as part of a green marketing strategy?

How can environmental claims in advertisements lead to the psychological reactance of consumers against green marketing?

How can green marketers successfully make use of environmental claims in advertisements?

1.4 Methodological Approach

This thesis discusses outcomes from gathered secondary sources which are presented in the theory part of this work and combined with specific insights based on primary research which are covered in the empirical part of this paper. In the theory part of the paper, the differences between green marketing and greenwashing are elaborated on. Based on the theory of green marketing and consumer behaviour theory, especially reactance theory, this thesis presents a set of hypotheses on the effects and influencing factors of consumer reactance against environmental claims as part of a green marketing strategy.

To test the proposed hypotheses, this paper conducted an empirical investigation designed as an experimental study with a randomised controlled trial. An intervention (environmental statement) was introduced to investigate its effects and the impact on consumers' psychological reactance and purchase intention. Survey participants were randomly grouped and assigned to one of two groups. One of the groups received the intervention and the control group received the plain version without intervention. The differences in the results could be related to the environmental claim.

To conduct the experimental study, two different simple graphic advertisements were designed. One of them represented a green marketing strategy by including an environmental claim in addition to the core message, which was the same in both ads. The ads were played out to groups in a quantitative questionnaire to measure how psychological reactance and purchase intention differed between the two groups. The survey was limited to a maximum of 200 to 250 subjects for reasons of research economy.

1.5 Thesis Structure

The first chapter presents an introduction to the thesis' problem definition, objective target, research questions, and methodological approach. The first step is to analyze and explain the initial situation and current state of research regarding green marketing, greenwashing, consumer reactance, and purchase intention. To end the first chapter, the thesis structure is presented.

Based on this, the second chapter covers a definition of green marketing supported by literature and theoretical research. The focus of this chapter is to explain its function in the marketing mix, determine how it is blended into the four components of product, price, place, and promotion, and investigate the differentiation of green marketing to greenwashing.

The third chapter is intended to deal with consumer behaviour. This chapter thoroughly covers the theory of psychological reactance and theoretical insights about consumers' psychology and green consumerism in general and with special regard to purchase intention. Concluding the theory part, all theoretical research questions are answered based on the literature review before entering the empirical part of the thesis.

The chapter on the experimental study starts with an explanation of the research design highlighting the operationalization, the methodology, and sample selection before laying out and summarizing the results of the research. This is followed by answering the empirical research questions of the thesis and linking theory and the empirical research findings of this thesis.

Finally, the conclusion resumes the thesis contents by giving theoretical and practical insights into how companies can optimise their green marketing efforts. A short section about the thesis' limitations and an outlook for further research concludes the work.

2 Green Marketing

This chapter reviews relevant literature and research about green marketing to gain more insights to answer the theoretical research questions. It includes an in-depth perspective on green marketing definitions, its anchoring in the marketing mix and a distinction between greenwashing and its implications.

2.1 Definition

The history of green marketing started 50 years ago. Katrandjiev (2016, p. 72) highlights the beginning of this concept by referring to the mid-1970s when both scientific literature and media used terms like eco-marketing, stable marketing, “green” marketing, and similar terms. In the mid-1980s, the first organic labels were introduced in the conventional food trade, and the first organic brands emerged (Grimm & Malschinger, 2021, p. 25).

While conventional marketing started to reach out to consumers with sustainability values, organic became more and more conventional and mass-market (Grimm & Malschinger, 2021, p. 27). Green products are becoming the new normal. The organic brand Frosch is an example of that. In the 1990s, their products achieve market leadership in the German household cleaner market. This example shows that sustainable products can be successful if companies succeed in winning the trust of buyers in the long term through consistent sustainability-oriented communication efforts and effective sustainability solutions (Grimm & Malschinger, 2021, p. 27).

The concept of green marketing gained popularity over the past decades and emerged to pertaining environmental protection, ecologically clean produced products, and preserving the planet’s resources and nature (Grimm & Malschinger, 2021, p. 28). This development was driven by the megatrend of greening, which the Zukunftsinstitut defines as the most defining trend of our time (Papasabbas, Muntschick, Schuldt, Pfuderer & Seitz, 2019). Sustainability is also gaining relevance in the media and public sphere, thus fuelling the demand for sustainable products and solutions.

Since the 2000s, the ecological evolution of marketing has evolved to the stage of sustainable marketing (Katrandjiev, 2016, p. 72). Sustainability-oriented marketing in its core function thus

sets out to solve the problems that it has caused itself, according to the description of the authors Kotler, Kartajaya and Setiawan (2017). The following table gives an overview of the development and the shifting focus of green marketing over time from the 1950s up to now (Grimm & Malschinger, 2021, p. 20).

| | Since the 1950s | Since the 1970s | Since the 1990s | Since the 2010s |
|-----------------------------|---|--|--|---|
| <i>Alignment</i> | Organic & ecological production | Organic/ecological certification | Innovations | Green communities |
| <i>Driver</i> | Criticism of the industrialisation of agriculture | Environmental awareness | Megatrend Greening | Digitalisation and megatrend greening |
| <i>Objective</i> | Product quality | Establishment of market structures | Growth | Community engagement |
| <i>Customer view</i> | Buyers with quality needs | Homogeneous organic/ecological buyers | Heterogeneous organic buyer segments | Brand advocate |
| <i>Key concept</i> | Direct sales | An organic alternative to conventional product | Differentiation from organic competitors | Authenticity, Transparency, Collaboration |
| <i>Customer interaction</i> | One-to-one sales | One-to-many sales | Many-to-many communication | Peer-to-peer |
| <i>Benefit</i> | Functional, organic farming | Functional, organic farming | Emotional | Social |
| <i>Marketing</i> | Native marketing | Sales marketing | Relationship marketing | Green marketing |

Table 1. Evolution of green marketing based on Kotler et al. (2017) marketing versioning (Grimm & Malschinger, 2021, p.20)

Green marketing can be defined in three different ways according to the American Marketing Association:

First, Green marketing is the marketing of products that are presumed to be environmentally safe (Retailing Definition). Second, Green Marketing is the development and marketing of products designed to minimize negative effects on the physical environment or to improve its quality (Social Marketing Definition). Third, Green Marketing is the efforts by organizations to produce, promote, package, and reclaim products in a manner that it is sensitive or responsive to ecological concerns (Environmental Definition). (Bhalerao & Deshmukh, 2015, p. 5)

Author Polonsky (1994, p. 3) understands green or ecological marketing as any activity that creates and facilitates exchange with the intention of satisfying human needs or desires while guaranteeing that satisfaction has minimal harmful effects on the environment. Green marketing is a program made to achieve the company's strategic and financial objectives while minimizing the negative impact on the natural environment or enhancing the positive impact (Leonidou, Katsikeas & Morgan, 2013, p. 153). Ottman (2017, p. 11) states the phenomenon of green marketing in her book as follows:

Over the past decade, few marketing topics have been more dynamic than that of “green” or “sustainability”. In a few short years, we have witnessed consumers shift from being highly sceptical about the performance of green products to the commoditization of green in many categories.

The recent explosion of green media, products, services, and marketing has brought with it a sea of confusion and a lack of trust, all of which risk undermining the entire green movement and returning us to an era of consumer apathy.

Mukonza et. al (2021, p. 5) write in addition that green marketing has become a buzzword used by the economy, governments, and non-profit organisations. The authors also point out that there are many different definitions for green marketing which confuses what green marketing is.

Author John Grant (2007, p. 16) explains the complexity of the term green marketing as follows: “Green issues and marketing can work against each other. One wants you to consume less, the other more. One rejects consumerism, and the other fuels it. But they aren’t always opposed.” According to him, green marketing can be divided into three activity stages. The first is labelled by Grant as “green” and described as setting new standards and communicating them. The product, brand, or company is greener than alternatives, but it’s about commercial

objectives only. The second stage is “greener” and addresses shared responsibility and collaboration. The “greener” marketing focuses on having sustainable and commercial objectives. The third and last stage is “greenest” where marketing supports innovation and cultural reshaping. “Greenest” marketing activities are about offering cultural objects on top of green and commercial objects. The goal is to make new business models normal and accepted by society impacting the way of life (Grant, 2007, pp. 25–28).

Yusiana et al. (2020, p. 106) mention the following objectives of green marketing as a business strategy philosophy: satisfaction of consumer needs for sustainable products and services, reaching environmental goals which are not incompatible with the company’s economic goals, and minimizing environmental damage while achieving these goals. Authors Grimm and Malschinger (2021, p. 299) define green marketing as a holistic approach that covers all areas of a company. For example, only selling sustainable products while exposing employees to unfair practices is ultimately not green marketing.

Peattie & Crane (2005, p. 366) claimed that green marketing needs to act as the link between current lifestyles and the marketing that serves and promotes them. Sustainable production and consumption should be the base for the future of sustainable marketing. Reference should be made here to Yusiana et al. (2020, p. 105) who conclude the following regarding the rise of green marketing:

The importance of the concept of green marketing can be seen from the increase in consumption which causes the depletion of natural resources, climate change, air pollution, and waste. Increased consumption is also one of the causes of global warming that is happening now and increasing environmental damage. The world community began to worry about the possibility of environmental disasters that threaten in terms of health and survival of their offspring.

Ottman (2017, p. 4) mentions in this context that the environmental concerns consumers fear the most are all health-related like water quality, air pollution, overpopulation, water availability, hazardous waste and global warming. These concerns, fears, and worries encourage consumers to rethink the environmental impact of consumption and to consider more sustainable products. “The growing demand for green consumption drives firms to develop green marketing strategies to show consumers their good corporate image and social responsibility” (Zhang et al., 2018, p. 740).

The concept of green marketing has not only become relevant for companies and consumers, but also for science and research, which is underlined by the following quote. “Green marketing, which promotes products by using environmental claims, has become a significant area of research. It is becoming more and more significant to reach sustainable growth by sustaining a competitive benefit and making a positive brand image” (Liao, Wu & Pham, 2020, p. 4).

The claims addressed can be divided into different types as part of advertising to target green consumers. Environmental advertising claims can be categorized into five segments: product-oriented claims, which focus on the attributes of a product (e.g. biodegradable), process-oriented ones addressing the internal production techniques or recycling methods (e.g. made from recycled plastic), image-oriented claims that link the organisation to good causes (e.g. committed to saving the rainforest), environmental facts like giving an independent statement to raise awareness for environmental issues (e.g. the oceans are polluted) and the fifth one is a combination of all claims mentioned (Carlson, Grove & Kangun, 1993, pp. 27–39).

Based on the literature review, it can be concluded that there are various goals, practices, and approaches to green marketing. This concept of marketing and its impact on consumers is highly relevant and important for advertising and the definition of claims. The importance for marketers is likely to increase significantly in the next years based on current research due to the relevance of global warming and its impacts.

In summary, it can be said that there is no universally accepted definition of green marketing due to its complexity, but there is a lot of overlap on the core of the concept, such as sustainability which is an integral part of it, and forms of advertising that include environmentally friendly content. Therefore, based on the literature, the definition of green marketing used for this thesis is the promotion of sustainable products using environmental claims.

2.2 Marketing Mix

The marketing mix consists of four Ps - Product, Price, Place, and Promotion - and shows the importance of a holistic approach that is required for green marketing (Kimmel, 2018, pp. 7–8). The various elements at the core of the marketing enterprise are collectively referred to as the marketing mix. It's the set of tools in marketing that companies make use of to achieve their objectives in their target markets. The concept goes back to the 1960s: Author Neil H. Borden defined marketing managers as mixers of ingredients as part of activities like product planning, pricing, distribution channels, advertising, packaging, and branding. E. Jerome McCarthy is an American marketing professor who simplified the early concept of Borden and came up with four basic categories which he referred to as the four Ps of marketing. “Marketers strive to develop quality offerings that are capable of satisfying people’s needs (products), and which are adequately affordable (price), accessible (place), and communicated and made known (promotion) to target customers” (Kimmel, 2018, p. 8).

Companies are advised to integrate the 4Ps into green marketing, which influences the way a product or service is being produced, priced, placed, and promoted and should be based on the principles of ethics and morality (Bhalerao & Deshmukh, 2015, p. 5). Product and advertisement modification changes to the production process, and packaging are all part of a broad range of activities incorporated in a green marketing strategy. It needs to be represented across the whole organisation to ensure that no actions in any part of the firm lower the ecological performance of products (Peattie & Crane, 2005, p. 365).

The following subchapters deal with each of the 4 Ps of the marketing mix in detail and summarize how product, price, place, and promotion are incorporated into green marketing.

2.2.1 Product

Many companies nowadays take the way their products are manufactured very seriously with modern methods and systems for measuring the impact of production on the environment. Industries are striving to lower manufacturing costs by using plastic and other commodities at lower prices. Companies are facing the challenge of wanting to manufacture eco-friendly products while using low-cost materials, which are often polymers and therefore non-biodegradable.

Green marketing in the sense of the product needs to incorporate being customer-friendly, inviolable, and easy to use for the purpose of getting attention and having an impact on potential customers' buying behaviour and purchase intention with its design (Bhalerao & Deshmukh, 2015, p. 6). Any technology used as part of the manufacturing process should be environmentally friendly and cause low emissions like renewable energy. The product itself should come as a great tool covering a wide range of consumers' needs as part of the usefulness criteria, while the value of a product covers consumers' expectations of a service or product and should consider different customer segments like price-conscious or brand-oriented customers. The product should be developed to fulfil or even exceed expectations without making concessions on the environmental value delivered. Companies that prioritize good quality produce greener products because of their long durability and lastingness. And lastly, the packaging is a key ingredient for a green marketing mix, as products wrapped up in non-biodegradable materials are not green products. This area of the product is very challenging for many companies' green policies, as many products are still packaged in polystyrene and polyethene (Bhalerao & Deshmukh, 2015, p. 6).

Author Prakash (2002, p. 286) suggests that products can be made greener and will be more environmentally friendly with certain production considerations. The product should be made in a way that it can be reconditioned, repaired, remanufactured, recycled, reused, or reduced (Charter, 2017, pp. 169–184). A product can be defined as green if it fulfils the same capabilities and characteristics as the competing conventional product while harming the environment less with its life cycle (Mahmoud, 2019, p. 22). Another definition is that green products do not pollute the environment, do not waste resources, and are recyclable, which helps save energy and reduce or exclude the use of toxic materials, pollution, and waste in general (Yusiana et al., 2020, p. 106). Author Ottman (2017, pp. 56–63) puts forward the argument that being green is no longer just a market position, and products must be green. Sustainability is an important consumer need and therefore an important feature of product quality.

It can be concluded that a green product is a key part of the green marketing strategy. Greening the product needs to consider a wide range of areas from design, technology, usefulness, value, and convenience to quality and packaging.

2.2.2 Price

Price is the amount consumers pay to purchase a product, which is shaped by many different factors like material costs, product category, competitors' prices, market share, and perceived value.

“The price for green products mostly required the extra costs incurred by consumers as a form of quality products that are more environmentally friendly” (Yusiana et al., 2020, p. 106). It is generally assumed that green products are more expensive than non-green ones (Luchs, Naylor, Irwin & Raghunathan, 2010, p. 18). Addressing environmental issues comes with increased costs, while green marketing pricing policies should not exclude normal customers (Bhalerao & Deshmukh, 2015, p. 7).

Customers are willing to pay more if they have the perception that the product will deliver additional value like improved function, visual appeal, performance, taste, design, or environmental benefits (Mahmoud, 2019, pp. 22–23). In some cases, green products are more expensive than the ordinary alternative, which could also justify the accuracy of the product's environmental benefits. Some consumers choose the environmentally friendly option despite the higher price in any case.

2.2.3 Place

The question of where to place a product is key to marketing success. The third P of the marketing mix is 'place', which describes the distribution channel, taking the product from the manufacturers to the customers and managing logistics with reduced carbon emissions. The place where a product can be purchased is either physically available or online.

The goal of incorporating place into green marketing is to minimize the efforts in producing and selling products (Bhalerao & Deshmukh, 2015, p. 7). Online distribution is very common nowadays, which is very convenient for customers and makes the internet a green place by offering convenience for consumers and saving costs for companies with direct distribution. This makes it possible to lower the costs for the end consumers as well.

Transportation of goods is also part of distribution and placement. Most vehicles cause carbon emissions on the transport route. As part of a green marketing strategy, companies can incorporate sustainable means of transportation to lower the carbon footprint of distribution channels (Mahmoud, 2019, p. 23).

2.2.4 Promotion

„Not all firms have tried to use environmental claims to boost sales, and in fact, many now are consciously choosing not to” (Peattie & Crane, 2005, p. 362). This quote states that promotion as part of a successful green marketing mix is another big challenge for companies.

Promotion as the fourth P of the marketing mix covers all activities to create awareness about the products or services like advertising, marketing materials, direct marketing, paid campaigns, websites, on-site promotions, company presentations, and public relations. The goal of marketers is to influence target customers' purchase intentions with a promotional budget. Green promotion affects the selection of promotion partners by only choosing those with a green marketing strategy, the creation of promotional material, which is environmentally friendly, the careful selection of the advertising message considering environmental and societal impact and examining the content or message morally and ethically before distributing the content through any form of promotional activity (Bhalerao & Deshmukh, 2015, p. 7).

As Polonsky and Rosenberger (2001, p. 26) emphasize, one of the most difficult questions to address in the context of green promotion is what environmental information should be communicated and how it should be communicated. It's a more appropriate approach to communicating substantive environmental information, but it requires real actions to be meaningful. Firms must consider what consumers perceive environmental information to be and if they understand its message before companies embark on environmental-related promotion (Polonsky & Rosenberger, 2001, p. 26).

“Smart green marketers will be able to strengthen environmental credibility by using sustainable marketing and communication tools and practices. The key to a successful green marketing mix is credibility” (Yusiana et al., 2020, p. 106).

Having an impact on consumers' purchase intention and motivating them to buy products that are environmentally friendly is the goal of green promotion (Mahmoud, 2019, pp. 23–24). It should appeal to green consumers and address their wants and needs. Environmental claims including information on companies' commitments and measures to protect the planet are often part of a green promotion. „A green advertising campaign should be associated with a clear, transparent and understandable environmental claim through which the firms will be able to grab the consumer's attention” (Ankit & Mayur, 2013, p. 16).

In the course so far, it has become clear that the integration of product, price, place, and promotion and the greening of all 4 Ps of the marketing mix is essential for a successful green marketing strategy. The more comprehensive and encompassing the approach to all four aspects, the more likely green marketers are to succeed. To conclude this chapter, the following statement is emphasized, which also summarises and underlines these findings based on the literature review once again:

As mankind will keep on progressing, different issues and challenges on the environment and societal sides will keep on surfacing. On the societal sides these challenges mainly would be in the form of violation of ethics and moral principles. Hence a holistic approach to green marketing can be achieved by blending the principles of green marketing into marketing mix. (Bhalerao & Deshmukh, 2015, p. 8)

2.3 Greenwashing

“Greenwashing” originates from the term “whitewashing”. The history goes back to the late 1980s. The term “greenwashing” was first mentioned in 1986 by environmentalist Jay Westervelt, who had published an article about the tourism industry that promoted towel reuse back then (de Freitas Netto, Sobral, Ribeiro & Soares, 2020, p. 2). He accused hotels of greenwashing because they had asked their guests to use towels more than once to protect the environment when in reality they only cared about lowering costs and increasing profits (Akturan, 2018, p. 810).

“Disinformation disseminated by an organization so as to present an environmentally responsible public image; a public image of environmental responsibility promulgated by or for an organization, etc., but perceived as being unfounded or intentionally misleading” (de Freitas Netto

et al., 2020, p. 6). This definition was added to the Concise Oxford English Dictionary in the 1990s for the term greenwashing (de Freitas Netto et al., 2020, p. 6).

Misleading consumers about a company's environmental practices, the environmental benefits of a product or service, or insufficient environmental performance and positive communication about it is called greenwashing (Delmas & Burbano, 2011, pp. 66–67). Authors de Freitas Netto et. al (2020, p. 6) summarize the phenomenon based on an extensive literature review as follows: retaining “the disclosure of negative information related to the company's environmental performance and exposing positive information regarding its environmental performance.”

Author Grant (2020, p. 36) refers to a study from 2015 which defines greenwashing as follows: “communication that misleads people into forming overly positive beliefs about an organization's environmental practices or products” (Lyon & Montgomery, 2015, p. 223). He illustrates the term with an example from the 1980s by the American energy corporation Chevron. The company funded and advertised a conservation project to protect wildlife. The donations for the project itself cost only \$5000, while they had spent millions on TV advertisements about it (Grant, 2020, p. 36). Authors Szabo and Webster (2021, S. 719) describe the phenomenon of greenwashing as follows:

To communicate their environmental efforts, firms have applied green marketing strategies to help raise their competitive advantage and appeal to ecologically conscious consumers. However, not all green marketing claims accurately reflect firms' environmental conduct.

“Greenwash is misleading the public to make it look like the environmental performance of your company or products is better than it actually is” (Grant, 2020, p. 39). Author Grant (2020) points out that there are various ways companies can intentionally or unintentionally engage in greenwashing practices. There is a multidisciplinary character to greenwashing and therefore no general definition of the term got accepted yet. De Freitas Netto et. al (2020, p. 10) conclude that:

We can see that greenwashing can be perceived and accused by the observer in several different ways. From product-level claims with environmental labeling to firm-level nature-evoked executional elements in sustainability reports, the phenomenon may be classified in a complex variety of options.

This multifaceted amount of forms in which greenwashing has been observed offers difficulty for consumers to identify the phenomenon manifestations. Even among consumers considered expert consumers, well informed about greenwashing and the market in question, it is a challenge to identify greenwashing.

Akturan (2018, p. 811) draws the conclusion that there are two types of greenwashed advertising defined by literature: claim greenwashing and executional greenwashing. Parguel, Benoit-Moreau and Russell (2015, pp. 107–108) understand by ‘executional greenwashing’ the use of nature-evoking elements like backgrounds with natural landscapes, pictures with renewable energy sources, or endangered species, in advertisements to artificially intensify the ecological image of a brand, while ‘claim greenwashing’ is understood to be the use of text elements and arguments in the advertisement which create a misleading environmental claim.

Greenwashed ads can be divided into four categories: vague or broad claims without a clear meaning (e.g. “environmentally friendly product”), claims that omit important information (“this product contains no plastic”, while the product contains other harmful materials), false or fabricated claims which are an outright lie and a combination of all types (Carlson et al., 1993, pp. 27–39).

Szabo and Webster (2021, p. 734) examine in their publication that companies approach green marketing from different perspectives, and based on their interviews they describe different shades of greenwashing: intentional greenwashing, unintentional greenwashing, no greenwashing, and unadvertised green initiatives. They describe organisations by their level of transparency, their status of being green, and their green marketing strategy, which is summarized in the following matrix.

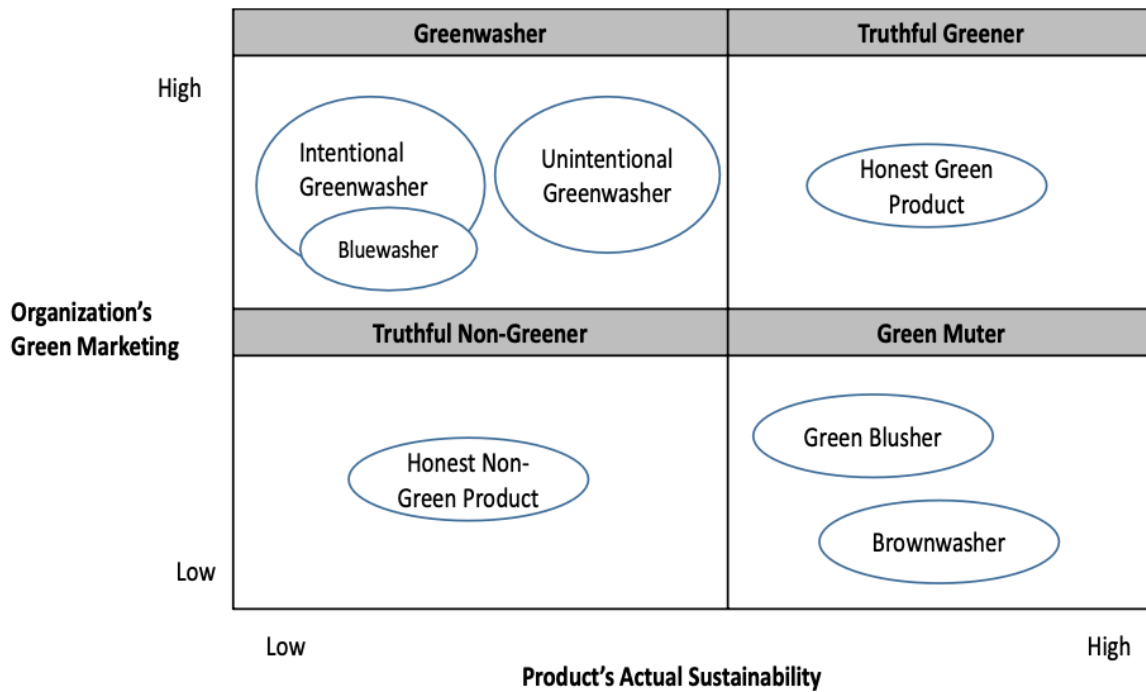


Figure 2-1. Shades of Greenwashing (Szabo and Webster, 2021, p.734)

Companies make use of a variety of advertising claims like “green”, “earth friendly” and “eco-friendly” driving consumers to “save the planet” or “go green” (Akturan, 2018, p. 809). If companies fail to keep up with these claims, greenwashing arises. Environmental claims in the context of greenwashing are misleading, dubious, insincere, or inflated (Cherry & Sneirson, 2012, p. 141). Mayer, Scammon, and Zick (1993, pp. 698–703) have compared three studies which all suggest the credibility of environmental claims is relatively low.

Reference should be made here to Furlow (2010), who emphasizes that the implications of greenwashing are widespread. He assumes that consumers do not know which products are actually environmentally friendly and even concludes that consumers will disbelieve all environmental marketing claims. If consumers find the claim untrustworthy, they are likely to ignore all environmental claims and as a result, avoid any product that would actually be better for the planet (Mayer et al., 1993, pp. 698–703).

Author Furlow (2010) goes even further and assumes that consumers insinuate greenwashing at every opportunity. Consumers are questioning the sincerity of companies and accusing them

of "greenwashing" whenever they suspect it because of the many vague and confusing environmental claims (Zimmer, Stafford & Stafford, 1994). The problem with greenwashing is not only that consumers are confused and misled, but also that sustainable companies that remain true to their environmental promises lose credibility and competitive advantage. The unscrupulousness of many market participants involved in greenwashing practices leads to a devaluation of credible environmental claims. Market saturation can also occur if green claims are overused and misused. The environmental credentials of a product may even become meaningless to consumers. Greenwashing leads to a lose-lose situation for the consumers and the entire green market (Akturan, 2018, p. 809).

Delmas and Burbano (2011, pp. 68–77) examine in their publication the drivers of greenwashing and divide them into four different categories. These are some of the reasons that give an explanation of why companies get involved in greenwashing: external drivers outside the market (uncertain regulations, NGOs, activists, and media), external drivers of the market (consumer and investor demand, competitiveness), organisational drivers (company culture, internal communication, and organisational passivity of the organisation), and individual psychological drivers (narrow decision-making framework, optimistic distortion). “The prevalence of greenwashing has skyrocketed in recent years; more and more firms have been combining poor environmental performance with positive communication about environmental performance“ (Delmas & Burbano, 2011, p. 84). Ensuring sustainable consumption and production patterns is a goal included in the Sustainable Development Goals of the United Nations, which causes many firms to prioritize environmental management within corporations and results in firms spreading the word about their environmental efforts to their stakeholders (Szabo & Webster, 2021, p. 719).

Companies fear accusations of greenwashing, which is why many firms have become very careful about environmental-related advertising (Peattie & Crane, 2005, pp. 357–358). Reference should be made here to Braga Junior, Martínez, Correa, Moura-Leite & Da Silva (2019, p. 238) who conclude the following based on their study:

For companies, this study showed that identifying a product as misleading can damage the image and lower the sales volume, market share, and financial results. In extreme cases, this will continue until the product is withdrawn from the market. In general, the main greenwashing practices (cheating the consumer) are related to green packaging, which relates the product to the environment or shows it as an organic product. Other

features of the products are related to vague and irrelevant, and even false information about the product being green or ecologically correct.

In the course of the literature review on this topic, greenwashing can be defined and summarized as an umbrella term for all marketing measures that are intended to give a company an environmentally friendly image among consumers without this corresponding to reality. For the experimental study as part of this thesis greenwashing is defined as follows: “the misleading use of environmental claims for marketing purposes” (Hoyer, MacInnis, Pieters, Chan & Northey, 2021, p. 417).

Furthermore, the in-depth review of the literature has revealed that the widespread use of greenwashing practices by companies and the increasing consumer awareness regarding it has strong implications for green marketing. The use of environmental claims in advertising poses a major challenge to marketing executives to be authentic and credible across all communication channels to introduce a successful green marketing strategy.

3 Consumer Behavior

This chapter gives an overview of research on consumer behaviour, and green consumerism and puts purchase intention and the theory of psychological reactance into focus. The literature findings gathered in this chapter form the basis for the theoretical research questions and essential core components of the experimental study.

3.1 Green Consumerism

Green consumerism is an accessible way to environmentally conscious and sustainable behaviour and encompasses a range of behaviours undertaken by consumers with the intention of promoting positive impacts on the environment (Sachdeva, Jordan & Mazar, 2015, p. 60). Jacquelyn Ottman (2017, p. 2), the leading US expert on green marketing, states that green is mainstream and basically everyone is a green consumer with 83% of the population in the United States representing every generation from Baby Boomers to Millennials and Gen Ys falling into one of the segments of green consumers.

Authors Grimm and Malschinger (2021, p. 28) elaborate on the rise of green consumerism in their book and point out that a societal shift in values toward environmentalism is emerging, to which all stakeholders are adjusting. At the centre of this development is a restructuring process of an individual ecological lifestyle into a broad social movement. Thus, the megatrend greening crosses a threshold and becomes a structuring force in the economy. Driven by the change in values as well as by digitalisation, people have changed and with it their consumer behaviour and their demands on companies and products or services. The influence of digitalisation and the emergence of social networks have led to broad participation in green consumption. Consumers have become more aware and much more critical of institutions, companies and politics. With access to more information, consumers have also developed their own ideas and are ready to improve society and actively shape it as modern citizens (Grimm & Malschinger, 2021, p. 28).

Green has gone mainstream because more people are worried about sustainability-related issues than ever before. Reflecting awareness that has been steadily building over the past 20 years, the general public is beginning to comprehend the impact these issues will have on their lives now, and in the years ahead – and is starting to act. (Ottman, 2017, p. 3)

Environmental awareness is on the rise, but there are still many obstacles to the spread of more sustainable consumerism (Moisander, 2007, p. 404). There is a huge complexity to it in terms of motivation and practice and confusion regarding environmentally responsible consumer behaviour and ecological information. According to Moisander (2007, p. 404) consumers have various perceptions of environmentally oriented behaviour and different ways of acting on it, therefore green consumerism can be labelled as a very complex form of consumer behaviour.

Major environmental problems and depletion of natural resources forced human civilization to focus on environmentally responsible consumption. More and more organizations are producing environmentally friendly products today and consumers are also showing increased willingness to purchase such products. However, a majority of previous studies report that consumers' favourable attitudes do not translate into actual buying actions and most of the consumers do not purchase green products. (Joshi & Rahman, 2015, p. 139)

Consumer behaviour in general covers how consumers think, feel and behave. It is the study of how individuals, groups, or organisations and all activities involved in purchasing, using and disposing of goods and services, and how they spend their money, time, and effort (Schiffman, O'Cass, Paladino & Carlson, 2014, p. 4). Research on green consumerism and consumer behaviour helps companies with making decisions regarding marketing communications like environmental claims in advertisements, which aim to encourage positive attitudes about the product and also to understand and counteract correlations such as those described in the quote above. Consumers' physiological and neurological responses to promotional assets can be measured. This can be very useful to determine the objectives of advertisements and help marketers determine words and visuals to encourage green consumerism.

Authors Solomon, Russell-Bennett & Previte (2012, p. 2) summarized the factors that influence consumer behaviour into three categories. The first one is demographics. An individual's interests and opinions can be influenced by age, gender, origin, race, culture, and other personal factors. The second category is psychological factors. The consumer's response to a marketing message depends on their personality, lifestyle, perceptions, and attitudes. The third category covers the influence of friends, family, status, educational level, income, and social media which can be summarized as social factors that have an impact on consumers' behaviour (Solomon et al., 2012, p. 2).

An integral part of research on consumer behaviour is decision-making models. Below is a simplified model which divides the process into three stages: input, process, and output stage.

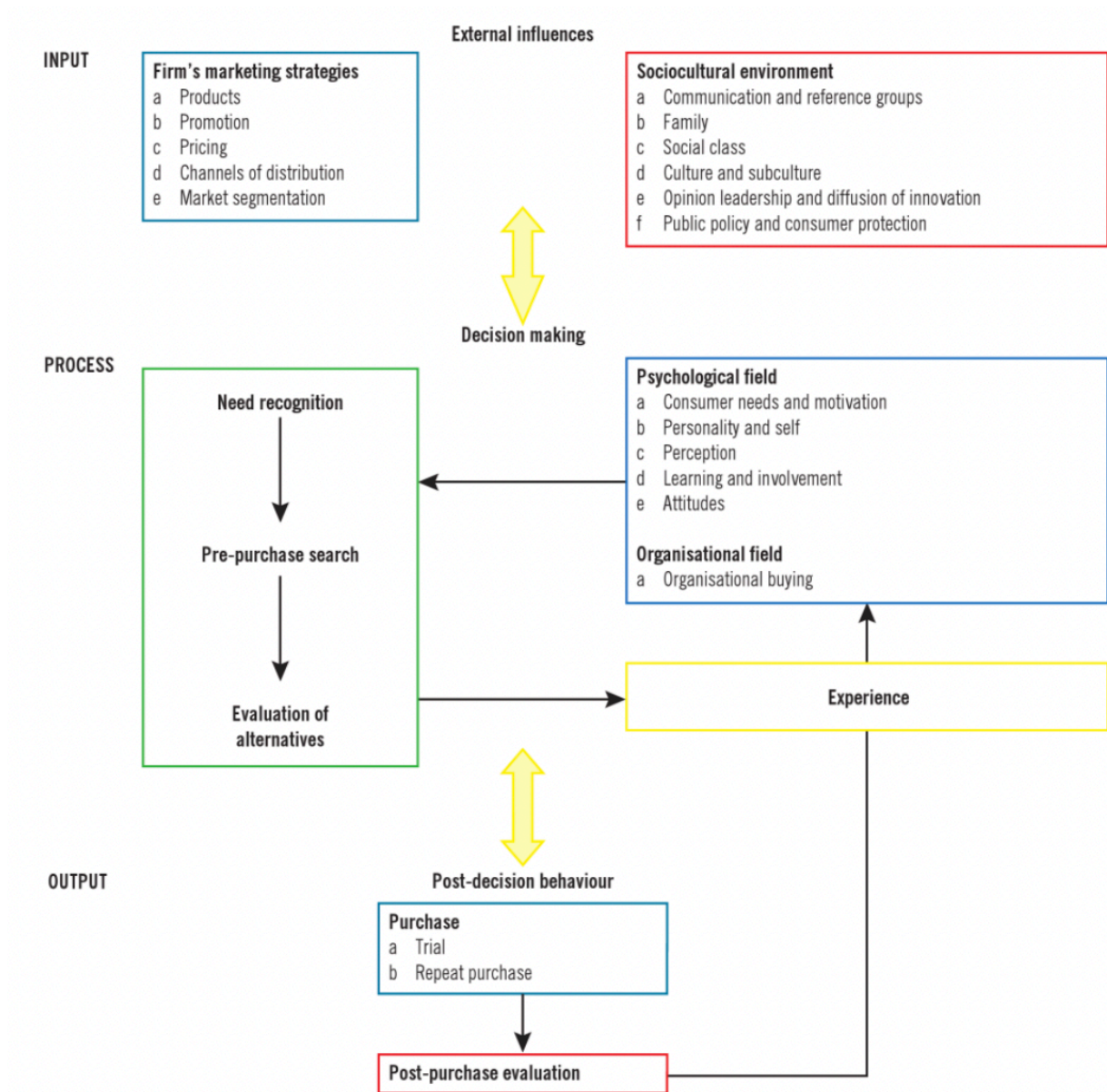


Figure 3-1. Consumer Decision Making Model (Schiffman, O’Cass, Paladino & Carlson, 2014, p. 24)

At the input stage consumers are influenced by two external factors: the firm's marketing strategies including the product, price, promotion, and place, and the sociocultural environment consisting of factors like family, social class, culture, reference groups, public policy, and opinion leaders (Schiffman et al., 2014, p. 24). Environmental claims which are examined in

the course of the experimental study of this thesis are part of the input stage, more precisely of the external influences of a firm's marketing strategies as part of a promotion.

Consumer behaviour can be defined into four buying types based on Assael (1987): complex, dissonance-reducing, habitual, and variety-seeking (Zackariasson & Dymek, 2016, pp. 20–21). Complex buying behaviour is when consumers are highly involved in the purchasing process and conduct intensive research before buying a high-value, infrequently bought product, for example, a car or a flat. Dissonance-reducing behaviour labels consumers as being highly involved in the process while facing challenges in choosing a brand, which involves fears of making the wrong choice. Low involvement in the buying process is describing habitual behaviour, for example when shopping for food and picking the preferred type of milk. The last type is variety-seeking behaviour which is characterized by consumers choosing a different brand or product, not because they do not like it, but for trying something new. An example of that is trying a new shampoo, or soft drink, or choosing a new restaurant for eating out (Zackariasson & Dymek, 2016, pp. 20–21).

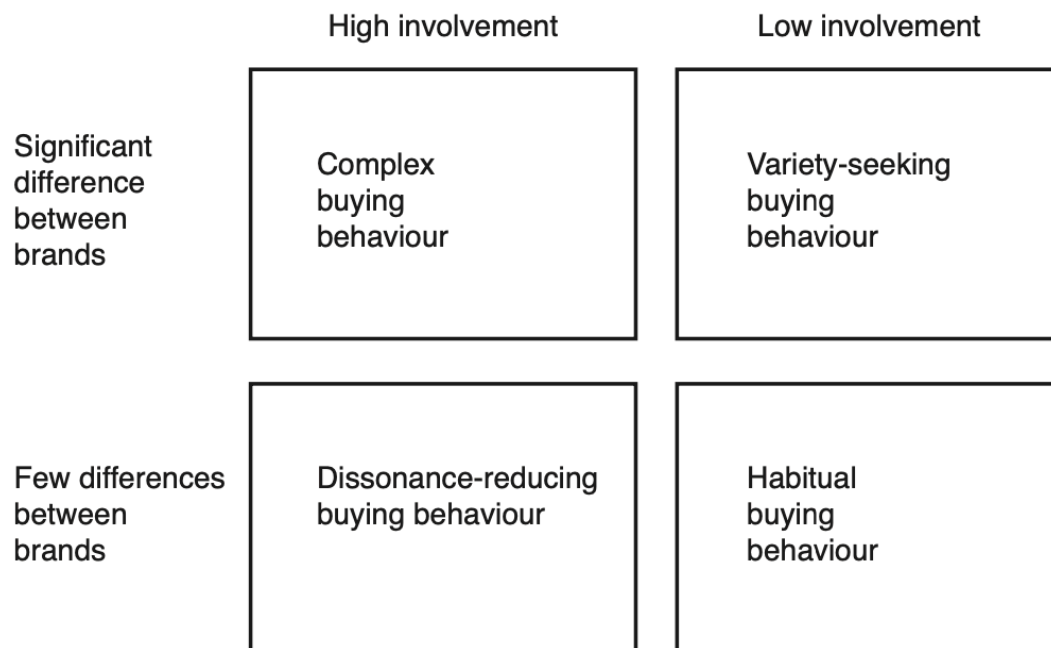


Figure 3-2. Four types of buying behaviour based on Assael (Zackariasson & Dymek, 2016, p. 21)

In their publication, Sachdeva, Jordan & Mazar (2015, p. 61) specifically examine the factors that lead consumers to buy environmentally-friendly products and to practice other forms of green consumerism: the internal psychological processes that influence green consumer behaviour like values and attitudes, the external social incentives, for example, culture or communities, and the macro-level structural factors like incentives.

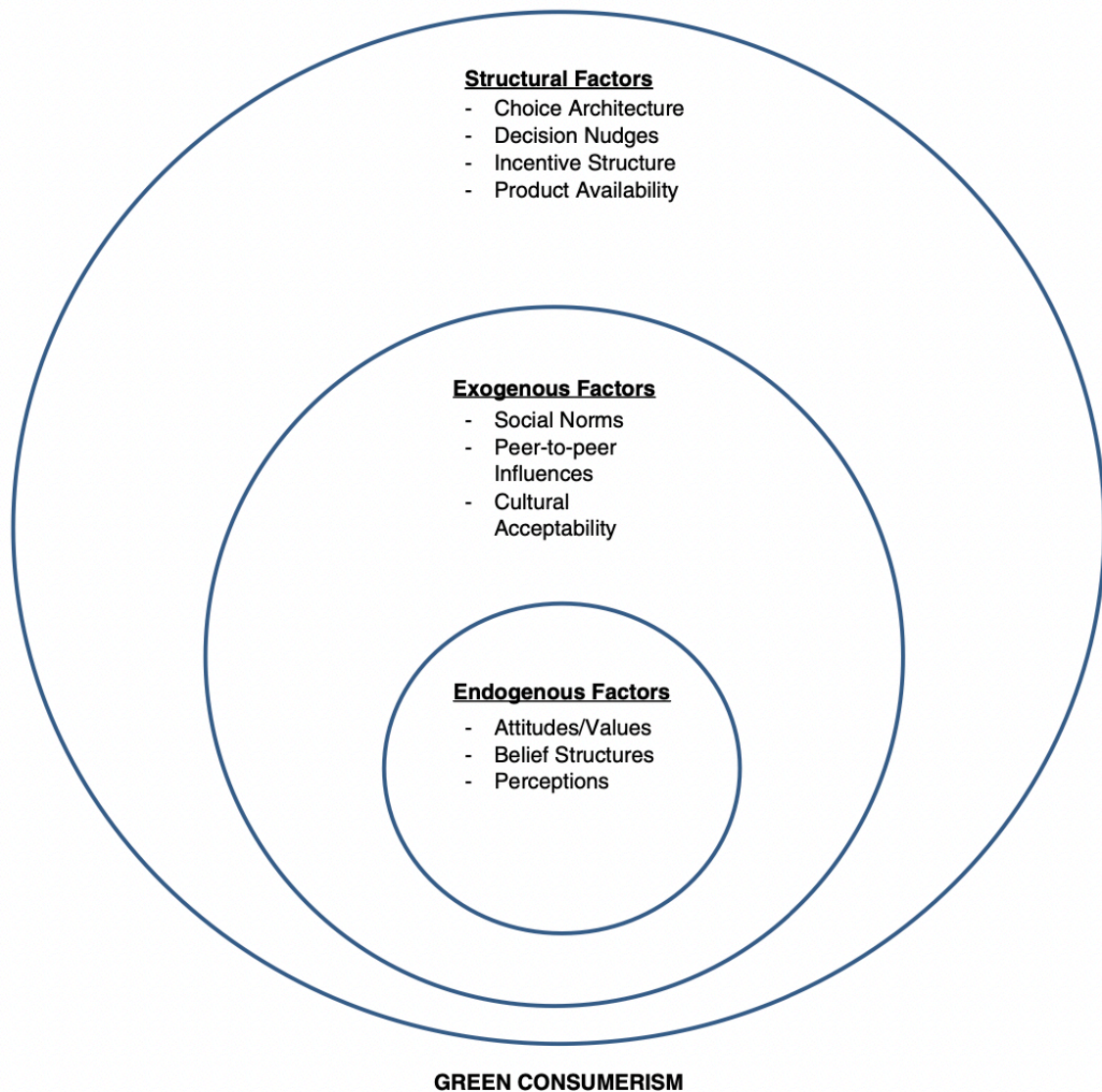


Figure 3-3. Multi-level factor model of green consumer behaviour (Sachdeva et al., 2015, p. 61)

Conservation behaviour is another important aspect of behaviour related to green consumerism (Hoyer, MacInnis & Pieters, 2013, p. 489). It describes actions taken to limit the use of rare raw materials. The following quote describes this behaviour in more detail:

Consumers are most likely to conserve when they accept personal responsibility for the pollution problem. For example, consumers who perceive that there is an energy shortage because of consumption by all consumers (including themselves) are more likely to do something about it. However, consumers often do not feel accountable for many environmental problems and are not motivated to act. Thus, for conservation programs to succeed, messages must make the problem personally relevant, such as educating consumers about how much energy and money they will save by cutting electrical usage. Environmentally conscious behaviours are, in fact, most likely to occur when consumers perceive that their actions will make a difference—called perceived consumer effectiveness. (Hoyer et al., 2013, p. 489)

Overall, it can be stated that green consumer behaviour is a very complex field of research and there are many different factors for green marketers to consider regarding green consumerism. Consumers' confusion about environmentally-friendly behaviour and its impact on the use of environmental claims is a challenge that is also underlined by the following quote:

The motivational complexity of green consumerism is yet further perplexed by the controversial and dubious nature of ecological information. Owing to the disagreement among environmentalists and researchers upon the appropriate strategies for sustainable development, it often remains unclear to a green consumer what actually is the ecologically correct thing to do. Moreover, the use of unsubstantiated environmental claims in green advertising in the past has been found to have caused sceptical views among green consumers about the environmental friendliness or environmental benefits of green products (OECD, 2001). (Moisander, 2007, p. 407)

3.2 Purchase Intention

One main pillar of the complete buying process is purchase intention, which is influenced by many factors like beliefs, demographics, values, knowledge, attitudes, and needs. Purchase intention is essential to forecast consumer behaviour and it is common to measure it as being representative of actual purchasing behaviour (Ahmad & Zhang, 2020, p. 3).

“Purchasing intention is usually defined as a prerequisite for stimulating and pushing consumers to actually purchase products and services” (Zhuang et al., 2021, S. 3). Purchase intention can be defined as a consumer's proposition to buy a product or service, which is a result of a process conducted beforehand to gather information based on past experiences and alternative options. In addition, research defines green purchase intention if the product chosen makes the consumer believe that their choice comes with a positive consumption effect (Yang,

2017, pp. 160–161). Wu and Chen (2014, pp. 81–95) examine in their publication that consumers' purchase intention depends on the perceived value of products.

The higher consumers' perceived value of green products is, the higher the tendency to have green consumption is. That is, consumers' purchase intention depends on the perceived value of products, and when the perceived value is high, the purchase intention will also be high. (Wu & Chen, 2014, p. 94)

Consumers' purchase decisions are affected by three factors: psychological factors, individual characteristics, and social factors. The psychological factors include motivation, demand and cognitive factors, the individual characteristics cover attitude, interest and lifestyle, while the social factors are family, reference group, and class (Zhuang et al., 2021, pp. 2–3).

Product, price, place and promotion influence consumers' purchase decisions (Yusiana et al., 2020, p. 107). Ankit and Mayur (2013, p. 16) elaborate on the important role advertising as a form of promotion plays in influencing consumers' purchase intentions for environmentally friendly products. Listing the real benefits of green products and providing detailed information is a major concern for consumers. The message should be unique, trustworthy, and honest, and marketers should not overdo the green advertising theme. Companies can gain credibility in this way. False claims cause consumers to doubt, which negatively affects the trust in green products and consumers' purchase intention (Akturan, 2018, p. 809). This connection between credibility and green consumer behaviour is further explained by the following quote:

Consequently, even when green consumers are willing to use a fair amount of their personal resources (in time, money and effort) to care for the environment, the perplexity of environmental information and the low credibility sometimes found with green marketing make it difficult for them to act on their environmental concern. The obscurity of environmental information also offers them an abundant source of handy excuses for denying their personal responsibility in ethically demanding situations. This element of the motivational complexity of ecologically oriented consumer behaviour not only demotivates green consumption but also provides green consumers with means of justifying their ecologically unsound decisions by referring to complex and contradictory nature of ecological information. (Moisander, 2007, p. 407)

The credibility of a claim in an advertisement can strongly affect consumers' reactions to the ad and the product itself and therefore is an important factor in influencing purchase intention. Purchase intention is further affected by labelling the product as ecologically friendly and information regarding the product's environmental attitudes (Zhu, 2012, p. 4). Ansar (2013, p.

655) proves in her study that environmental advertising, price, and sustainable packaging are also positively related to green purchase intention.

Authors Vu, Ha, Ngo, Pham & Duong (2021) conclude that green purchase intention could offer an effective solution to current environmental and ecological issues which are caused by unsustainable consumption and consumer behaviour. If a brand positions itself as an eco-friendly brand that offers products and services to consumers while addressing environmental concerns, it will tend to increase green purchase intent among its customers (Siyal, Ahmed, Ahmad, Khan & Xin, 2021, p. 14). In addition, greater environmental concerns are related to an increased intention to buy environmentally friendly products. The environmental awareness and knowledge of the individual as well as the functionality and environmentally friendly features of the product are the most important factors, while the high price and the inconvenience of buying the product are the biggest obstacles to a green purchase intention (Joshi & Rahman, 2015, p. 129).

3.3 Psychological Reactance

Reactance theory can be found in many publications on consumer behaviour which shows its fundamental importance for research. The theory has consequences for marketing, especially for the communication policy of a company (Raab, Unger & Unger, 2010a, p. 68).

The theory of psychological reactance is a motivational theory that describes how people react to a perceived restriction of their freedom (Raab, Unger & Unger, 2010b, p. 65). Reactance is the motivation to restore restricted or eliminated freedom. According to the authors, a prerequisite for the emergence of psychological reactance is

- a) to have the idea of having a margin of freedom
- b) to consider this margin of freedom to be somewhat important
- c) to perceive a threat to or elimination of this margin of freedom.

The scope of freedom consists of all subjectively expected behavioural alternatives, regardless of whether these are available to the person concerned at the moment or in the future or not (Raab et al., 2010b, p. 65). The scope of freedom thus consists not only of the freedom that a

person possesses but also of the scope of freedom that a person believes to possess. Freedom does not only refer to the area of observable behaviour. It also includes the freedom to hold certain opinions.

The theory of psychological reactance was first addressed by Jack W. Brehm in the 1960s. He proposed that when a person's freedom is restricted through the elimination of behaviour, the person experiences a state of psychological reactance (Brehm & Brehm, 2013, pp. 2–5).

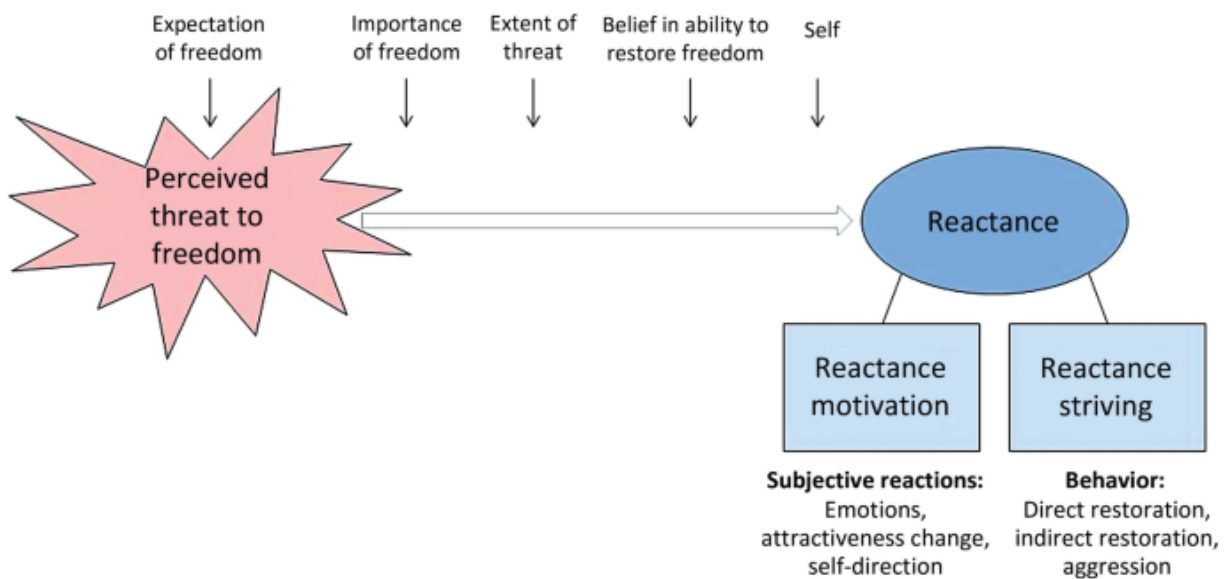


Figure 3-4. Reactance Theory (Mühlberger & Jonas, 2019)

The severity of the psychological reactance depends on the conviction of having a margin of freedom, and on the importance and the extent of the restricted margin of freedom in relation to the number of available alternatives (Brehm & Brehm, 2013, pp. 37–56). Mental effects and behavioural effects are to be distinguished as consequences of reactance (Wendlandt & Hansen, 2005, p. 140). Mental effects include changes in attitude and attractiveness in favour of the threatened freedom, i.e., it is inwardly upgraded by the individual. If the reaction is strong enough, behavioural effects can also occur, for example in the form of explicit resistance or protest.

Brehm himself has already relativized his theory in relation to socially legitimate restrictions on freedom, since individuals voluntarily forego certain freedoms, for example, because of their

social role (Wendlandt & Hansen, 2005, S. 141). Reactance is not an isolated state but must be seen in interaction with other motives, such as social motives.

| Reactance triggers | Determination of reactance strength | Reactance effects |
|---------------------------|---|---|
| Social influence | Conviction of having freedom | People do the opposite |
| Environment | Importance and extent of restricted freedom | Change of opinion in the opposite direction |
| Own Decision | Own assumed competence | Individual restoration of freedom |
| | Perceived similarity of alternatives | Aggression |

Table 2. Overview of the theory of psychological reactance (Raab et al., 2010a, p. 70)

The social influence, the environment, or one's own decision can be reactance triggers. The reactance strength can be determined by

1. the conviction to possess freedom
2. the importance and the extent of restricted freedom
3. one's own assumed expertise
4. the perceived similarity of the alternatives.

Individuals do the opposite, change their minds in the opposite sense, restore their freedom individually, or react with aggression as a reactance effect (Raab et al., 2010b, p. 70).

In this context, Raab et al. (2010b, p. 72) mention that changing attitudes toward products is particularly important in marketing communication. Consumers are supposed to find the product they are courting particularly attractive. If this intention to influence becomes too obvious, the target groups of the influence feel restricted in their scope for decision-making.

This can result in a weaker communication effect than what could have been possible, or even a change in attractiveness in the opposite direction, i.e. a boomerang effect.

In relation to scarcity, a technique in sales marketing, a restriction of accessibility also means a loss of freedom (Prack, 2010, p. 157). If consumers perceive a restriction of behavioural freedom, they are motivated to resist the restriction or reverse a restriction that has taken place. Therefore, products are often artificially scarce, and limited editions are often offered in order to trigger reactance.

Another example of reactance effects is educational campaigns by governments that aim to educate the public, for example about the negative health effects of smoking or drinking alcohol (Wendlandt & Hansen, 2005, p. 142). Several studies that examined such campaigns to check whether they are reduced in effectiveness by reactance effects or even achieve the opposite prove that reactance was successfully triggered. A very strong influencing pressure in various advertisements on the mentioned topic led to reduced influencing success.

Reactance also arises as a reaction to selling strategies that build up a very high pressure to influence (Wendlandt & Hansen, 2005, p. 142). For conducting sales talks, the theory of psychological reactance clearly shows the superiority of so-called "soft-selling" methods over the "hard-selling" concept. Reactance effects can always be reduced if the decision-makers have at least a limited number of alternatives to their own decision (Raab et al., 2010b, p. 69). Ideally, for example, it is still possible in a sales talk to keep several alternatives open for the decision.

In general, it can be assumed that the more intensively the intention to influence is perceived and the more intensively certain behaviour is advertised, the more likely it is that reactance effects will occur. Communication measures that are normally considered to have certain neutrality like press releases as part of public relations measures are particularly at risk of reactance, especially if they show clearly a certain intention to influence (Raab et al., 2010b, p. 68). In general, it can be useful for the design of communication measures to reduce the possible perception of pressure to change opinions.

| | Advertising | Product publicity |
|------------------------------------|----------------------------|-------------------------------|
| High intensity of influence | Somewhat low medium impact | Somewhat higher medium impact |
| Low intensity of influence | Very low impact | Very high impact |

Table 3. Effect of communication depending on the intensity of influence and type of communication effect (Raab et al., 2010a, p. 73)

Changing attitudes towards products is particularly important in marketing communication. If the intention to influence becomes too obvious, the target groups of the influence feel restricted in their scope for decision-making (Raab et al., 2010a, pp. 72–74). There are many techniques to reduce the perception of intent to influence. A certain degree of distraction can lead to an increase in impact because the influence is perceived less as such and thus less reactance is triggered. The fact that people are often somewhat distracted by other activities such as eating, entertainment, etc. when they consume television or radio advertising may well favour the communication effect, but only when the distraction is not too strong. Humour, music, and image-based communication offer creative possibilities. All of them are suitable to conceal the intention to influence, but at the same time, they could be distracting too much from the actual message (Raab et al., 2010a, pp. 72–74).

In summary, it can be stated that reactance is a real challenge for green marketing and the theory of reactance itself is important for gaining further insights into consumer behaviour regarding environmental claims (Wendlandt & Hansen, 2005, S. 143-149). There is a fine line between convincing consumers and creating too much pressure through promotional messages like environmental claims which can have the opposite effect and can cause green marketing efforts to backfire. The implications of reactance should be considered by every successful green marketer for any advertising campaign.

4 Theoretical Research Questions

This chapter summarises the literature findings and answers the theoretical research questions based on the previous chapters. The first theoretical research question to elaborate on is based on the main research question is the following:

Which factors influence consumers' differentiation between green marketing and greenwashing?

The various forms in which greenwashing appears make it difficult for consumers to distinguish between green marketing and greenwashed advertisements (de Freitas Netto et al., 2020, p. 10). Even for consumers who are well educated and aware of the phenomenon, it is a challenge to identify greenwashing. Nevertheless, some factors actually lead to differentiation among consumers.

Above all, brand image is taken into account by consumers when they see environmental claims during the evaluation process (Grimm & Malschinger, 2021, p. 285). It is important that consumers see a high probability that the brand actually represents sustainable interests. There should be no contradictions between the intended environmental claim and consumers' actual experiences with the brand, product and company. It should also be taken into account that there is always a fine line between green marketing and greenwashing for marketers, as the numerous negative reports about greenwashing and negative actions by companies have led to scepticism among consumers in the first place. They tend to be critical of green products and question whether only economic interests and profit maximisation are behind a company's environmentally conscious and sustainable self-portrayal. Author Furlow (2010, pp. 22–24) emphasizes that consumers will see through any false claims.

According to Yusiana et al. (2020, p. 106) the key to successful green marketing and convincing consumers is credibility. Consumers' reactions to a company and the advertised product can be affected strongly by the credibility of a claim in an advertisement (Zhu, 2012, p. 4). Credibility is essential in order to counteract implicit prejudices and minimize the scepticism of consumers. It is particularly relevant to the existing information asymmetry in purchasing decisions because consumers are not in a position to objectively verify the sustainable properties of a product or a campaign. As a result, the purchase of a sustainable product always involves a risk for the

consumer purchasing it. The purchase risk is also fuelled by the increasing phenomenon of greenwashing. Eco-friendly seals of approval from independent third-party organisations are a common tool for establishing trust and credibility and ensuring that consumers can distinguish between green marketing and greenwashing in advertising (Grimm & Malschinger, 2021, pp. 286–287). An eco-label attempts to demonstrate the environmental characteristics of a product. For example, the relevance of waste, energy consumption, consumption of natural resources, water pollution, noise pollution, soil pollution, air pollution, and impact on ecosystems are assessed and published (Hussain, 2008, p. 85).

The prerequisite for credibility is a foundation in authenticity. Only when consumers believe a corporation and its environmental claims to be authentic they will believe the message (Grimm & Malschinger, 2021, pp. 287–288). An environmental claim should be clear, transparent, understandable, and authentic (Ankit & Mayur, 2013, p. 16). The authenticity is based on the fact that a company is not confronted with the accusation of greenwashing (Grimm & Malschinger, 2021, pp. 287–288). Consumers should have the impression that a company or a brand does not present itself differently to the outside world than it actually is.

The criteria of social psychology to describe the authenticity of people by authors Goldman and Kernis (2006, pp. 294–301) can also be applied to companies. If the following four criteria are fulfilled, then a firm and its claims as part of advertising are experienced as authentic by consumers: First of all, the company's strengths, weaknesses, motives, and values for a certain behaviour should be conscious, which should result from self-reflection. Secondly, the company should come to terms with its existence through processing negative and positive information about itself and not communicating the status quo in a falsified way. The company should also behave and act based on the output of the objective self-reflection process and their own values, motives, and attitudes without pleasing people. And lastly, the firm's behaviour and its values should be in harmony, which is described as relational orientation. Deviant behaviour can nevertheless occur if someone suspects a "punishment" by the social environment and therefore tries to avoid it. From a sustainability perspective, however, this must be supplemented by the aspect that people and companies adapt to the required sustainable behaviour of the social environment (Grimm & Malschinger, 2021, p. 288). They thus adapt to the socially desired behaviour of their environment without actually having matching values. The behaviour is therefore not oriented towards their own values but towards the values of the social environment. In this case, consumers could already suspect greenwashing.

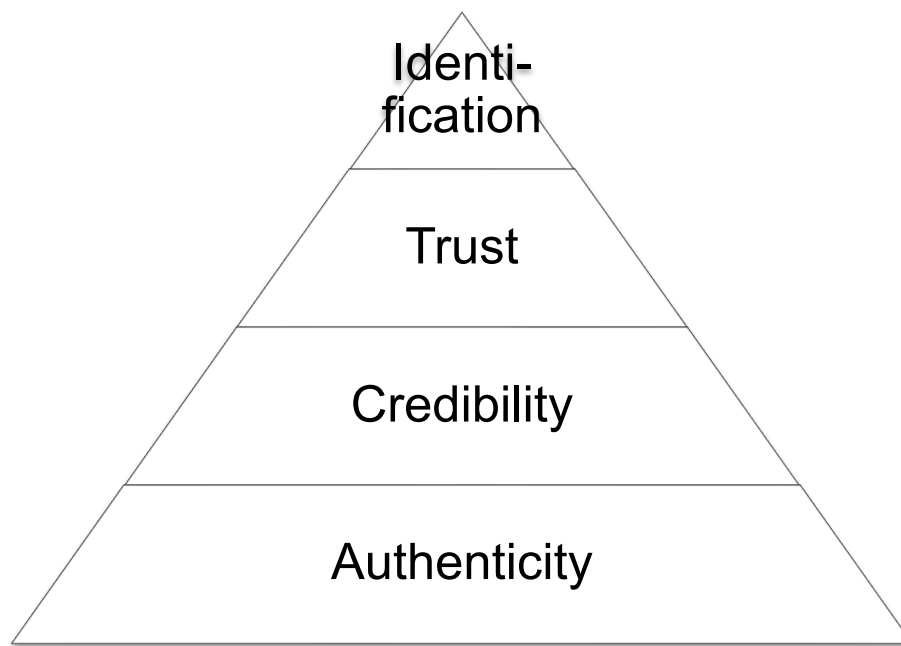


Figure 4-1. Green Marketing Pyramid based on Grimm & Maschlinger (2021, p. 287)

Trust develops based on credibility. The time difference is an essential difference between credibility and trust (Grimm & Malschinger, 2021, pp. 289–290). Credibility refers to the behaviour of companies and their communication in the past. Trust is oriented towards the future, as it is based on repeated positive experiences and the assumption that the company will behave consistently. The last level of the green marketing pyramid is identification-based trust. This can only be achieved through a close bond or constant relationship or communication. Consumers identify with the company through shared values and environmental goals. Emotions are more effective to achieve this compared to content based on facts. The ultimate goal of green marketing is to build loyal relationships between companies and consumers. Once identification-based trust is achieved, consumers become brand advocates and help spread the word about the company and its products by recommending them on their social networks online and offline (Grimm & Malschinger, 2021, pp. 289–290).

In summary, it can be concluded that the factors which influence consumers' differentiation between green marketing and greenwashing are transparency, authenticity, credibility, trust, and identification. A holistic approach to green marketing and comprehensive incorporation of a sustainable concept as part of the company's mission in product, price, place, and promotion creates the basis for consumers to believe environmental claims and trust that the company is truly committed to protecting the planet and acting sustainably throughout the whole

organisation instead of being associated with greenwashing by consumers. Making unfounded claims in advertisements or spreading information about sustainable business practices without delivering sufficient basis or proof for these claims, results in consumers differentiating between green marketing and greenwashing and suspecting the company of the latter.

The second theoretical research question that will be answered in the following is:

Which psychological aspects of consumers must be considered when using an environmental claim in advertisements as part of a green marketing strategy?

The psychological aspects that need to be considered when marketers make use of environmental claims in advertising as part of the green marketing strategy are diverse and range from factors such as personality, lifestyle, perceptions, attitudes, values, demand, and motivation to various theories of consumer behaviour, like psychological reactance.

Very often consumers do not feel responsible for environmental problems which results in a lack of motivation to act accordingly (Hoyer et al., 2013, p. 489). Therefore, advertising messages must give the environmental problems a personal meaning, such as an indication of how much energy or money could be saved daily by taking the bicycle instead of the car to work. This conservation behaviour, which describes actions taken to limit the consumption of raw materials and is another distinguished psychological aspect that needs to be considered when using environmental claims in advertisements. The perceived consumer effectiveness is another notable psychological aspect to be taken into account. Consumers are more likely to act in an environmentally conscious way and make decisions when they feel that their behaviour can impact the environment and make a difference.

Appealing to consumers is the goal of a product that is advertised with an environmental claim. However, marketers must take into account that in case this intention to influence is becoming too obvious, the target groups of the influence feel restricted in their decision-making scope (Raab et al., 2010a, p. 72). As a result, the communication effect may be weaker than it could have been possible, or there may even be a change in attractiveness in the opposite direction, a so-called boomerang effect.

In summary, it can be stated that the stronger the perceived influence, the stronger the triggered reactance, and the lower the effectiveness of the influence. However, a recognizable form of influence may be necessary to achieve an effect at all, which is the influencing effect (Raab et al., 2010a, p. 70). This is the persuasive character of the message that triggers the effect of this message, e.g. a change of attitude or purchase intention in the direction of the message. Thus, an influencing effect in the direction of the message and a reactance effect in the opposite direction of the message are to be expected, while both can compensate each other in their effect. A message would then trigger a maximum attitude change when the difference between the influencing effect and the reactance effect is greatest.

In the course so far, it has become clear that reactance is a relevant factor of psychological aspects that need to be considered when using environmental claims in advertising as part of a green marketing strategy. Green marketing campaigns can fail and even rebound if the advertising message and environmental claims put too much pressure on consumers.

Overall, it can be stated that the differentiators between green marketing and greenwashing are transparency, credibility, trust and authenticity, and consumers' identification with the message, product, company, or brand. If these factors are not present or are not supported by the content of the advertising that contains the environmental claim, it is very likely that consumers will suspect greenwashing. The most important result is that psychological reactance must be considered when using an environmental claim in advertisements as part of a green marketing strategy. In summary, it can be concluded that if the pressure to convince consumers when using an environmental claim in advertisements as part of a green marketing strategy is too high, the consequence can be that reactance is triggered and the consumers therefore consciously decide against the product in order to restore their freedom of choice.

5 Experimental Study

5.1 Research Design

This chapter puts the hypotheses, operationalization, methodology, and sample selection of the experimental study into focus. This is followed by the presentation of the results of the research.

5.1.1 Operationalization

The empirical research questions and the hypotheses form the basis for the operationalization. Operationalization is the process of assigning empirically ascertainable, observable, or endurable indicators to a theoretical concept (Atteslander et al., 2010, p. 46). This makes it possible to measure the empirical phenomena designated by a concept.

The hypotheses were derived based on the results of the literature review and the current state of research on the topic of green marketing, environmental claims, consumer reactance, and purchase intention. The complete process of the empirical research is illustrated below.

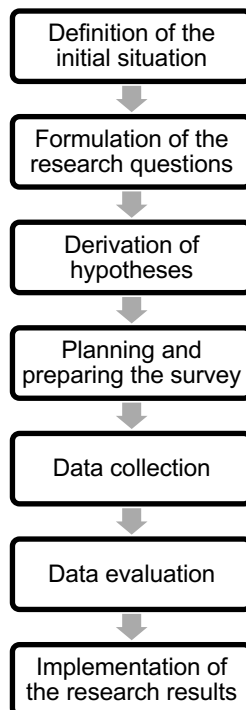


Figure 5-1. The procedure of the empirical study based on Berger and Grabner (2016, p. 112)

Hypothesis 1 was derived from the main research question which is: What impact do environmental claims have on consumers' reactance and purchase intention? Based on the literature review, it was assumed that environmental claims in advertisements have an impact on consumers' reactance and purchase intention.

Therefore, it was presumed that:

Hypothesis 1: Environmental claims in advertisements have an impact on consumers' reactance and purchase intention.

Raab et al. (2010b, p. 72) have examined in their publication that consumers are supposed to find the product they are courting particularly attractive. If this intention to influence becomes too obvious, the target groups of the influence feel restricted in their scope for decision-making. This may result in a weaker communication effect than what could have been possible, or even a change in attractiveness in the opposite direction, i.e. a boomerang effect.

Based on this, it was presumed that:

Hypothesis 2: If environmental claims in advertisements lead to consumers' reactance, there's a negative effect on purchase intention.

Hypothesis 3, 4, and 5 were based on the following research question of this thesis: How can environmental claims in advertisements lead to the psychological reactance of consumers against green marketing?

Mayer et al. (1993, pp. 698–703) have elaborated that if consumers find the claim not credible, they are likely to neglect all claims with environmental messages and end up avoiding buying any product that could actually be better for the environment. Furlow (2010) has drawn the conclusion that consumers are unsure which products actually help the planet and even concludes that consumers will disbelieve all environmental marketing claims. Mayer, Scammon, and Zick (1993, pp. 698–703) have compared three studies which all suggest that the credibility of environmental claims is relatively low.

Consequently, it was expected that:

Hypothesis 3: *Environmental claims in advertisements lead to the psychological reactance of consumers against green marketing.*

Hypothesis 4: *Environmental claims in advertisements lead to the psychological reactance of consumers against green marketing if they do not believe the message is credible.*

Hypothesis 5: *Environmental claims in advertisements as part of a green marketing strategy are not trusted by consumers.*

Hypotheses 6 and 7 were derived from the last research question of this work: How can green marketers successfully make use of environmental claims in advertisements?

According to Peattie and Crane (2005, pp. 357–358) companies fear being accused of greenwashing and are cautious about implementing environment-related marketing campaigns. Yusiana et al. (2020, p. 106) have stated that companies can increase their credibility by using eco-friendly marketing and communication tools and practices. They have claimed that the key to a successful green marketing mix is credibility.

Derived from these publications, it was presumed that:

Hypothesis 6: *Green marketers can successfully make use of environmental claims when consumers are not suspecting elements of greenwashing in the advertisement.*

Hypothesis 7: *Green marketers can successfully make use of environmental claims in advertisements if they provide further resources about the product's impact on consumers.*

The following variables were determined based on the derived hypotheses: likeliness to buy, claim impact, consumer reactance, purchase intention, the credibility of the message, the trustworthiness of environmental claims, suspicion of greenwashing, and resources provided. All variables were coded on a scale of 1 to 5 with one being low and 5 being high. Each hypothesis was linked to variables that represented questions in the questionnaire. The variables were linked to the questions in the questionnaire as follows.

| Question | Item | Variable |
|-----------------|--|---|
| 1 | Are you likely to buy the displayed product based solely on the advertisement? | Likeliness to buy |
| 2 | My willingness to buy the product is impacted by the claim shown in the advertisement. | Claim impact |
| 3 | I feel my freedom of choice is limited according to the content of the advertisement. | Consumer reactance |
| 4 | I feel an unpleasant arousal or pressured by the content of the advertisement. | Consumer reactance |
| 5 | I would rather buy a product that is advertised without an environmental claim than one being promoted as causing fewer carbon emissions and protecting the environment. | Purchase intention |
| 6 | I trust that the message of the advertisement shown is credible. | Credibility of the message |
| 7 | I generally trust environmental claims in advertisements to be true. | Trustworthiness of environmental claims |
| 8 | The advertisement contains elements of greenwashing. | Suspicion of greenwashing |
| 9 | I feel that being referred to further resources in the advertisement about the product's impact would increase my willingness to buy. | Further resources provided |

Table 4. Overview variables of the experimental study

5.1.2 Method Selection

This thesis applied an empirical investigation which was designed as an experimental study with a randomized controlled trial to test the proposed hypotheses. An environmental claim was introduced as an intervention to study the effects and impact on consumers' psychological reactance and purchase intention. The survey participants were grouped by chance and got randomly assigned to one of the two groups. One group received the intervention, and the control group was shown the plain version without an intervention. Therefore, differences in the results could be related to the environmental claim.

To conduct the experimental study, two simple identical graphic advertisements promoting bottled water were designed. No-name bottled spring water was chosen as the product for the designed advertisements because it meets basic daily needs and therefore needs no further explanation of the possible benefits of the product. The choice to use a hypothetical generic product was made to avoid any bias due to branding and perceptions tied to the brand name or product.

The first designed advertisement for the study included an environmental claim and the second one was the same graphic advertisement without the environmental claim. The one with the environmental claim represented a green marketing strategy. The core message, layout, fonts, and colours were the same on both graphics. Both advertisements had the same format and contained a promotional tagline: "Every drop is healthy for you." The ad with the environmental claim additionally had "... and the planet." in the headline. In addition to the core message a phrase that addresses the sourcing of the product was placed next to the picture of the bottled water. The one advertisement for the experimental condition included "Sustainably sourced" and "Naturally sourced" for the control group. Additionally, the advertisement for the experimental group showed the environmental claim "Every bottle is made from recycled plastic which causes fewer carbon emissions and protects the environment." below the subline on sourcing origin of the bottled water.



Figure 5-2. Graphic advertisement with environmental claim



Figure 5-3. Graphic advertisement without environmental claim

Surveys have become an indispensable method in empirical social research. Representative surveys are the most rational means of obtaining reliable information (Atteslander et al., 2010, p. 110). The advantage of internet surveys is the low cost of data collection, the elimination of the need to enter data directly into a database, and the associated relatively rapid availability. The following disadvantages of online questionnaires must also be considered for the method selection. The population of internet users is difficult to define due to the different forms of use. Furthermore, drawing a real random sample that allows generalization to the population and can be seen as representative is hardly possible. The sample is also self-selecting (Atteslander et al., 2010, pp. 166–168).

The two advertisements got played out in a quantitative online questionnaire with a random display of one of the two graphics. In the first part of the survey, participants were asked to closely examine the advertisement for their group (experimental or control) and then had to indicate their likeliness to buy, which was followed by eight questions on claim impact, reactance, purchase intention, credibility, the trustworthiness of environmental claims, suspicion of greenwashing and the effects of providing further resources.

The online survey included items based on a 5-point Likert scale to measure how the psychological reactance and purchase intention differ between the two groups. Survey participants could answer each question on a five-point Likert scale. For question one the answer options were very unlikely (1), unlikely (2), neutral (3), likely (4) and very likely (5). For questions two to nine, the scale went from strongly disagree (1), disagree (2), neutral (3), agree (4) to strongly agree (5). The complete survey included the following nine questions:

Question 1: *Are you likely to buy the displayed product based solely on the advertisement?*

Question 2: *"My willingness to buy the product is impacted by the claim shown in the advertisement." Please state to what extent you agree with the statement.*

Question 3: *"I feel my freedom of choice is limited according to the content of the advertisement." Please state to what extent you agree with the statement.*

Question 4: *"I feel an unpleasant arousal or pressured by the content of the advertisement." Please state to what extent you agree with the statement.*

Question 5: *"I would rather buy a product that is advertised without an environmental claim than one being promoted as causing fewer carbon emissions and protecting the environment."* Please state to what extent you agree with the statement.

Question 6: *"I trust that the message of the advertisement shown is credible."* Please state to what extent you agree with the statement.

Question 7: *"I generally trust environmental claims in advertisements to be true."* Please state to what extent you agree with the statement.

Question 8: *"The advertisement contains elements of greenwashing."* Please state to what extent you agree with the statement.

Question 9: *"I feel that being referred to further resources in the advertisement about the product's impact would increase my willingness to buy."* Please state to what extent you agree with the statement.

5.1.3 Sample Selection

Before the survey had started, the research questionnaire was pre-tested to verify that the final graphic advertisements, questions, and wordings used were perceived in the desired manner. The pre-test proceeded through a private WhatsApp group where people were invited to test the final version of the survey, make comments and suggest improvements. The survey got pretested with a representative sample of 20 participants to improve the quality of the survey as well as the overall research design to reduce the risk of misunderstandings and failure in advance. After the pretest, no improvements had to be made.

The questionnaire was created using the online survey tool Unipark and was publicly accessible for six weeks from the 16th of May until the 27th of June 2022. The responsive design of the questionnaire enabled participants to complete the survey on desktop computers as well as on mobile devices such as smartphones and tablets. After clicking on the link, the participants were redirected to the start page of the survey which provided information about the following questionnaire as an experimental study. The topic or the exact title was not mentioned in order

not to bias the results. In addition, the name and email address of the author was stated for credibility reasons and to provide the option to reach out for further questions regarding the research topic. Finally, the participants were informed that the survey would be conducted completely anonymous and that any data provided is treated confidentially.

A convenience sampling method was used and the survey was restricted to a maximum of 200 to 250 participants for reasons of research economy. The participation was completely anonymous for the protection of personal data. The population studied was not limited to a specific geographical location.

| | |
|---------------------------|--------|
| Total sample | 481 |
| Completion rate | 43.66% |
| Total completed | 210 |
| Experimental Group | 103 |
| Control Group | 107 |

Table 5. Summary of sample statistics

During the period of six weeks, the questionnaire was completely and validly filled out by a total of 210 participants (n=210). This corresponds to a completion rate of 43.66%. The allocation of the survey participants into one of the two groups was random and equally distributed. There were 103 participants (n=103) in the experimental group and 107 (n=107) in the control group.

5.2 Presentation of Results

The evaluation was carried out with the statistics program IBM SPSS Statistics 27 and EFS Reporting+. For the t-tests for independent samples, correlations, as well as frequency tables and bar charts were used to investigate the hypotheses. The first part gives an overview of the results of the responses of the experiment group and the control group as bar charts with descriptions of the key results.

Question 1: *Are you likely to buy the displayed product based solely on the advertisement?*

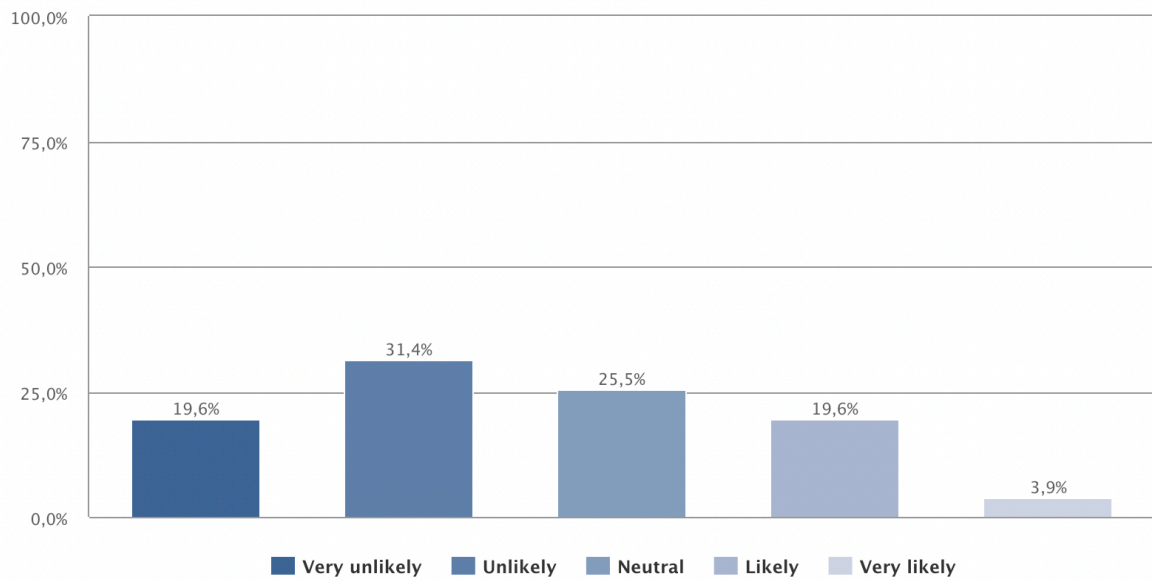


Figure 5-4. Results Question 1 Experimental Group (n=103)

Half of the participants in the experimental group had no intention to buy bottled water based on the advertisement. One-quarter said they were neutral in their likeliness to buy.

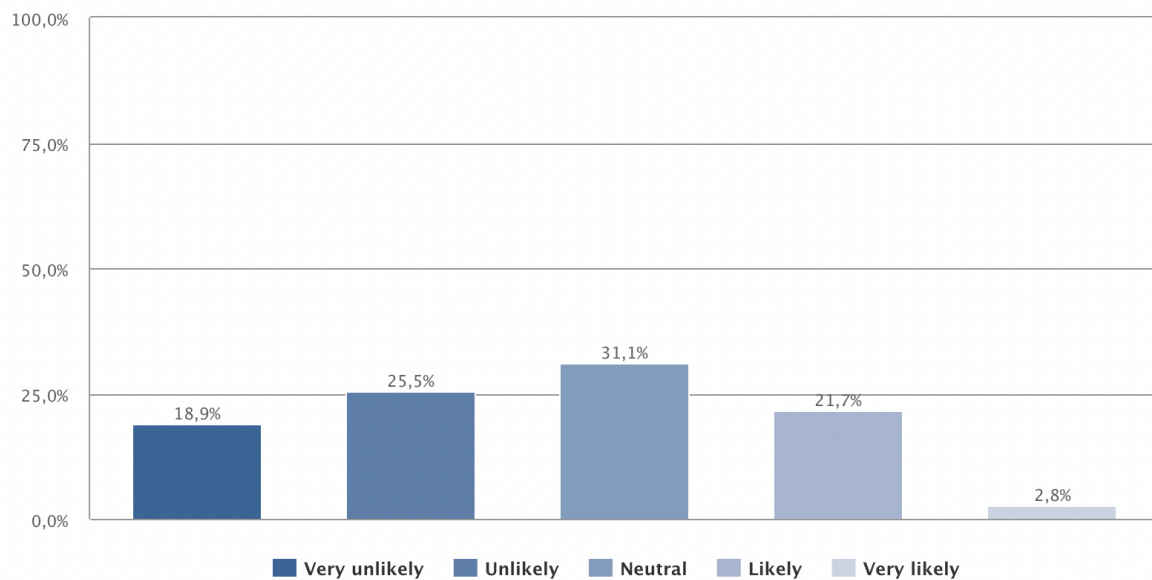


Figure 5-5. Results Question 1 Control Group (n=107)

Neutrality was higher in the control group with over 30%. Almost one-quarter of the participants indicated that they were likely to buy the product shown based on the ad.

Question 2: "My willingness to buy the product is impacted by the claim shown in the advertisement." Please state to what extent you agree with the statement.

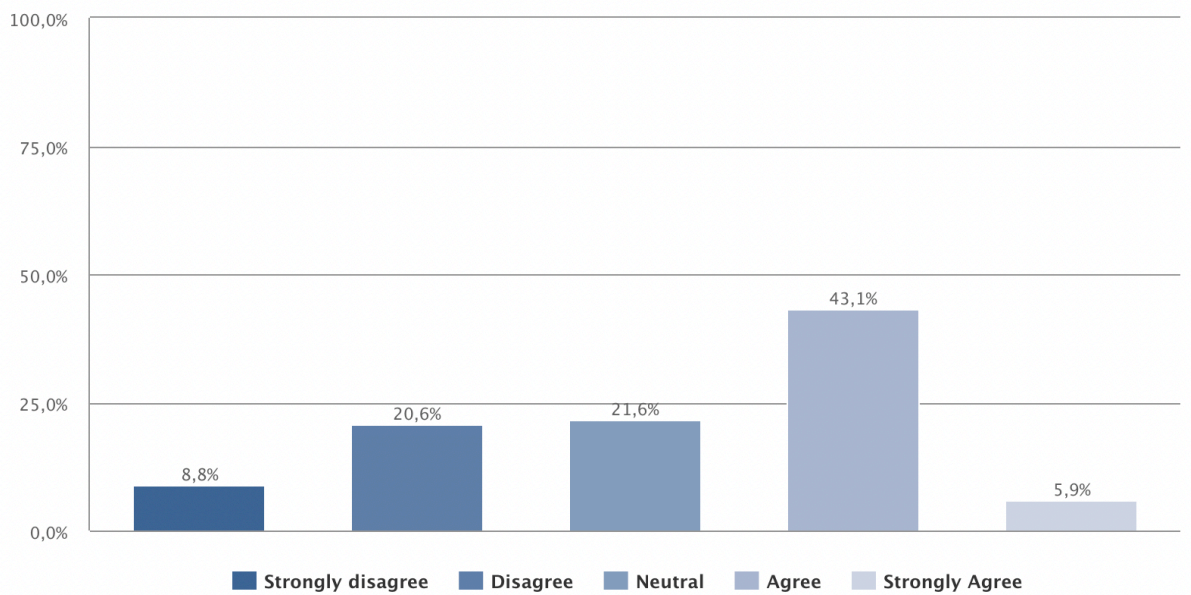


Figure 5-6. Results Question 2 Experimental Group (n=103)

Almost half of the participants in the experimental group agreed with the statement that their willingness to buy the product was influenced by the statement shown in the advertisement.

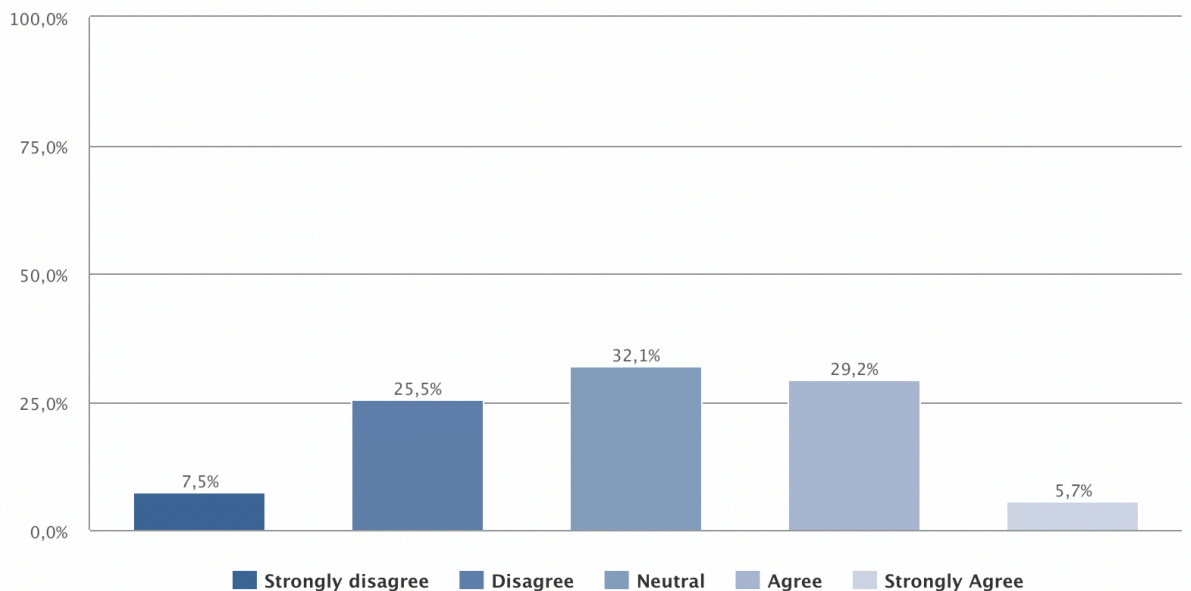


Figure 5-7. Results Question 2 Control Group (n=107)

In the control group, on the other hand, agreement with this statement was significantly lower. Over a quarter even disagreed with the statement. 32% rated the statement as neutral.

Question 3: "I feel my freedom of choice is limited according to the content of the advertisement." Please state to what extent you agree with the statement.

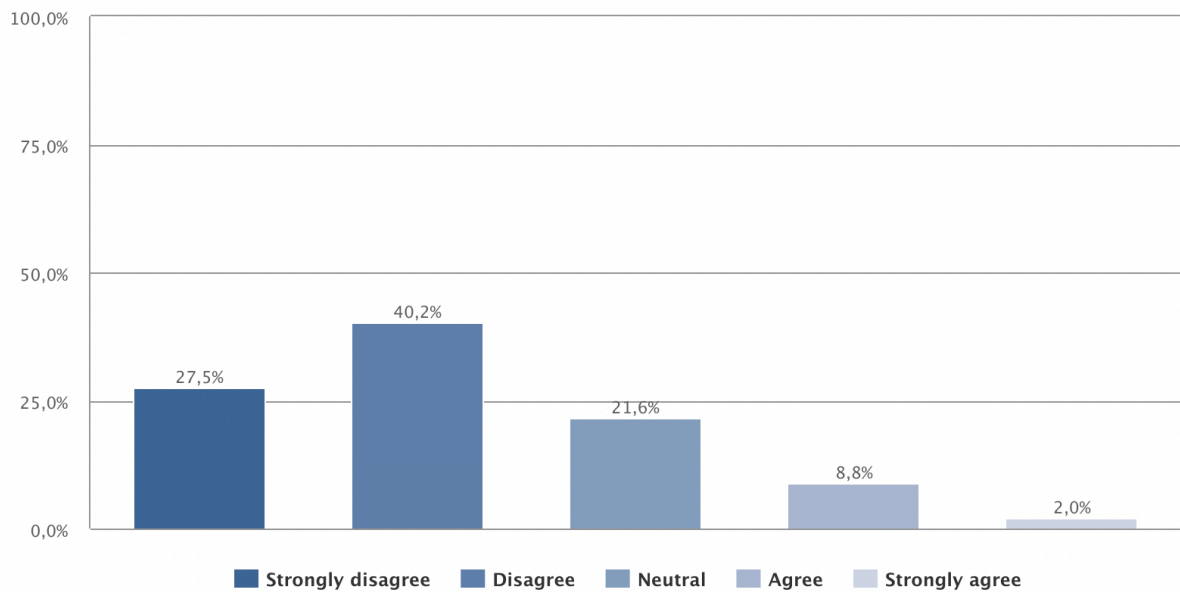


Figure 5-8. Results Question 3 Experimental Group (n=103)

Almost 70% of the experimental group disagreed or strongly disagreed with the statement. Only slightly more than 10% agreed that their freedom of choice was limited due to the ad.

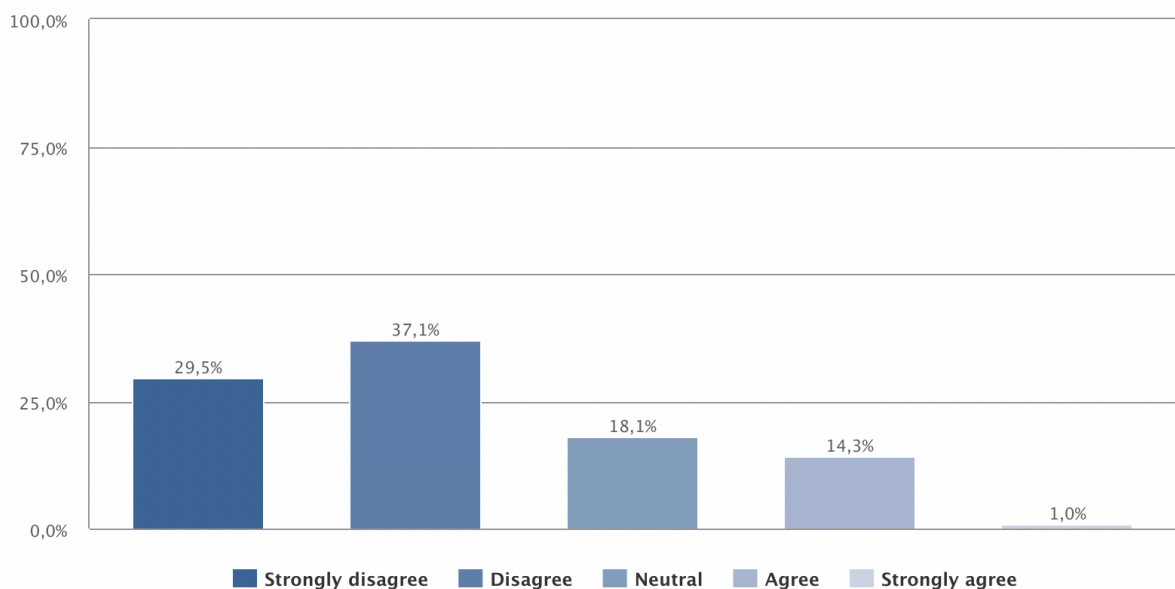


Figure 5-9. Results Question 3 Control Group (n=107)

In the control group, too, almost 70% disagreed with the statement, although the strong disagreement was even higher here by a few per cent. Only one per cent strongly agreed with it.

Question 4: "I feel an unpleasant arousal or pressured by the content of the advertisement."
Please state to what extent you agree with the statement.

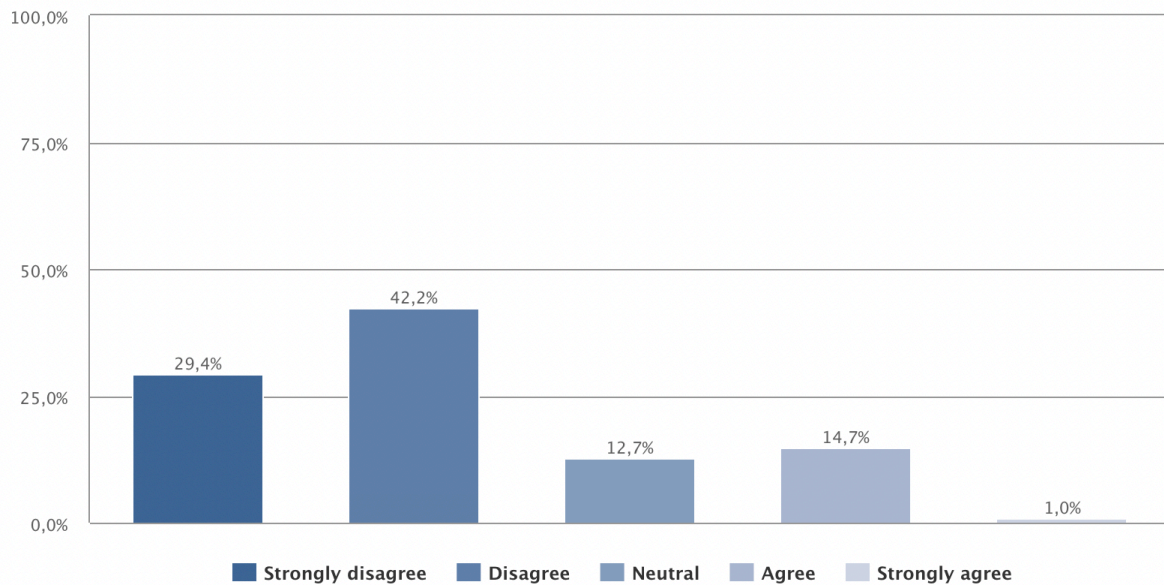


Figure 5-10. Results Question 4 Experimental Group (n=103)

The responses to the second question addressing reactance were similar. Just over 70 per cent indicated no or even strong disagreement with the statement that they had felt unpleasantly aroused or pressured by the content of the ad.

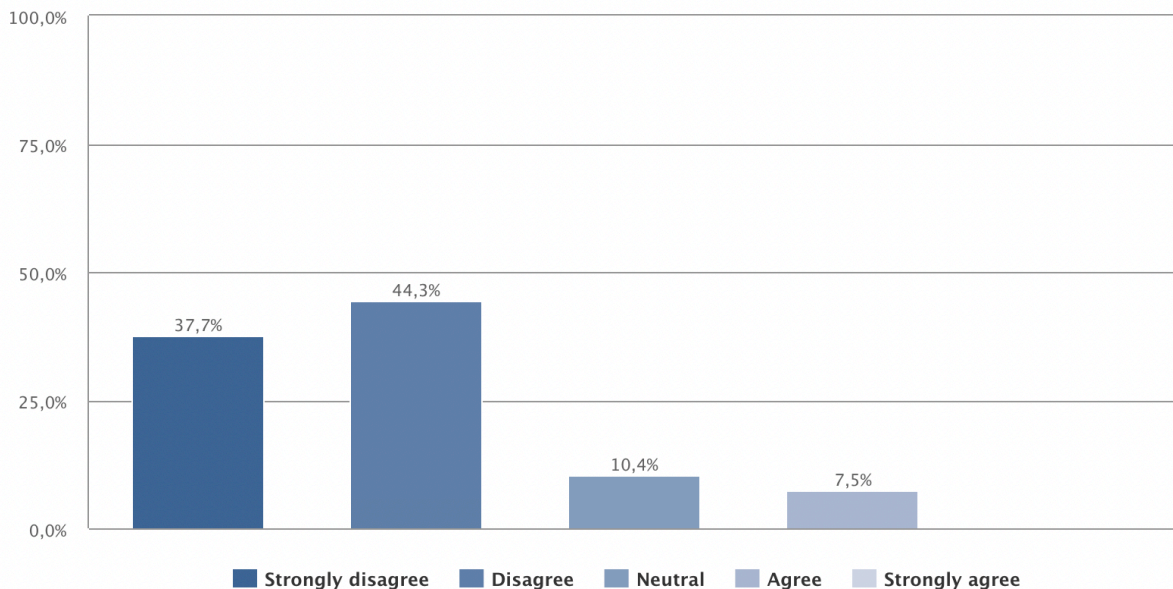


Figure 5-11. Results Question 4 Control Group (n=107)

Disagreement within the control group was even higher over 80% of participants stated that they disagreed or strongly disagreed with the statement.

Question 5: "I would rather buy a product that is advertised without an environmental claim than one being promoted as causing fewer carbon emissions and protecting the environment." Please state to what extent you agree with the statement.

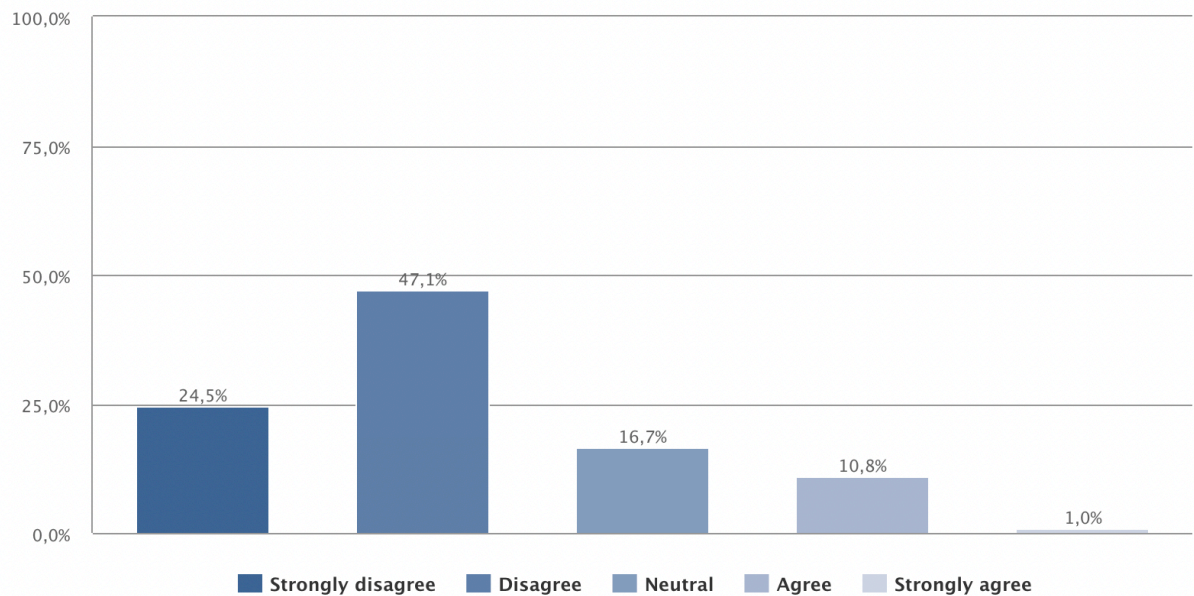


Figure 5-12. Results Question 5 Experimental Group (n=103)

Over 70% of the experimental group were more likely to buy a product that was advertised with the claim of causing fewer carbon emissions and protecting the environment.

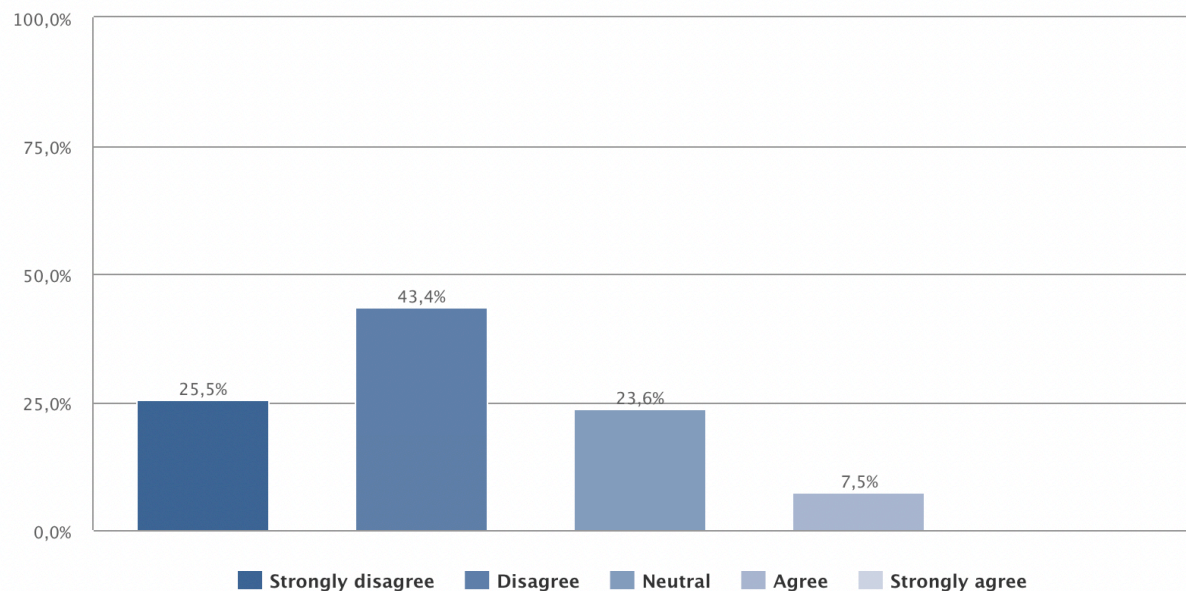


Figure 5-13. Results Question 5 Control Group (n=107)

Over 65% of the control group were more likely to buy a product that was advertised with the claim that the product causes fewer carbon emissions and protects the environment.

Question 6: "I trust that the message of the advertisement shown is credible." Please state to what extent you agree with the statement.

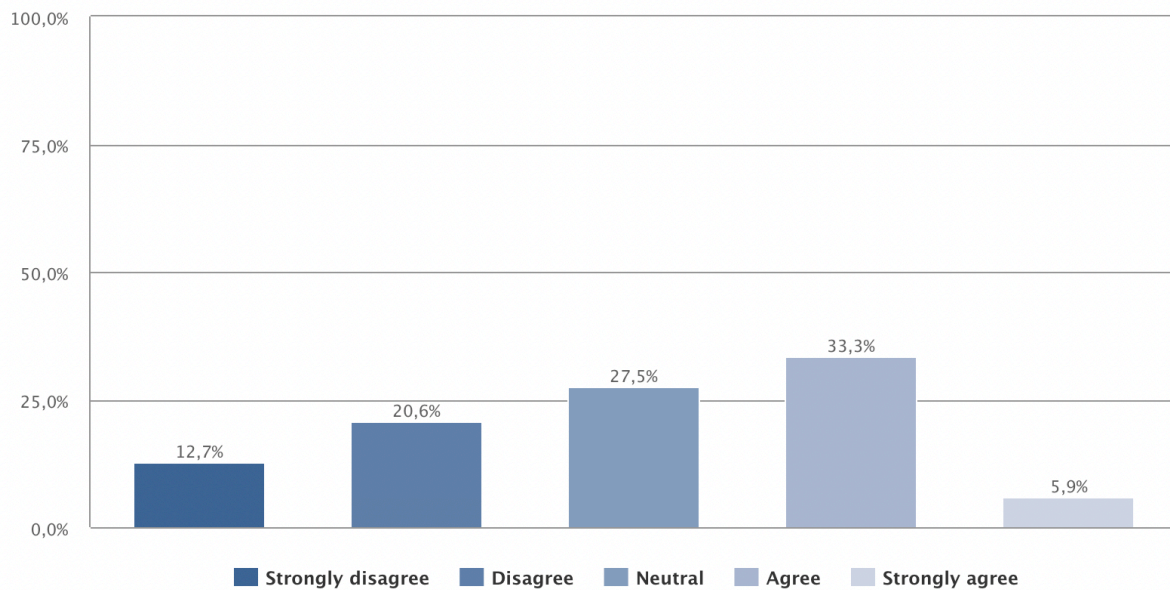


Figure 5-14. Results Question 6 Experimental Group (n=103)

Almost 40% of participants in the experimental group trusted that the message of the advertisement shown was credible. One-third, on the contrary, were in favour of distrust and had disagreed with the statement.

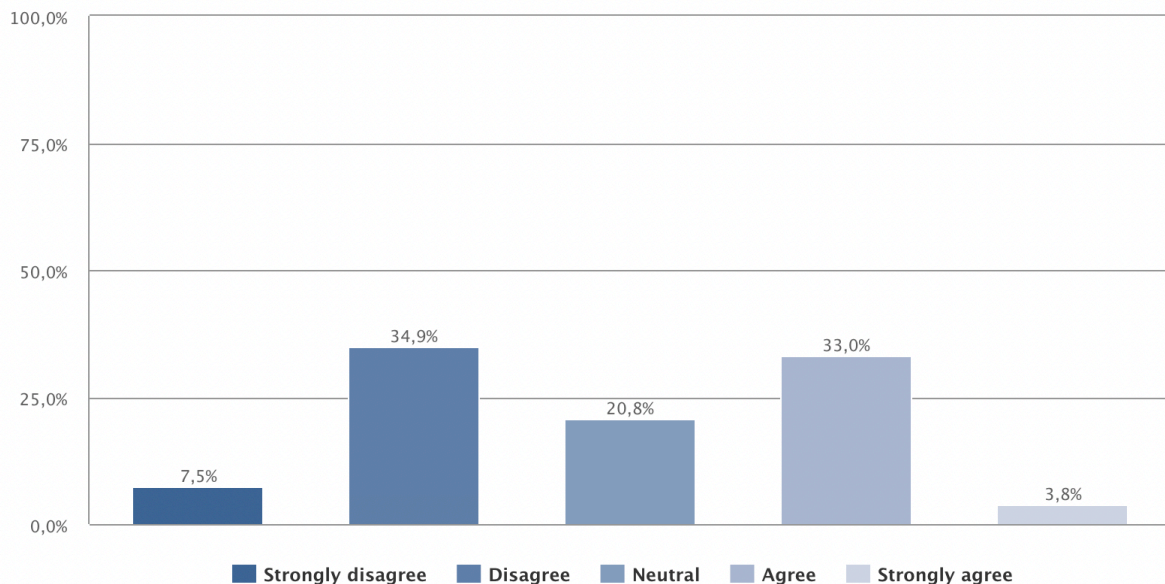


Figure 5-15. Results Question 6 Control Group (n=107)

In the control group, over 35% trusted the credibility of the message as they stated agreement or even strong agreement, and over 40% rejected the credibility statement.

Question 7: "I generally trust environmental claims in advertisements to be true." Please state to what extent you agree with the statement.

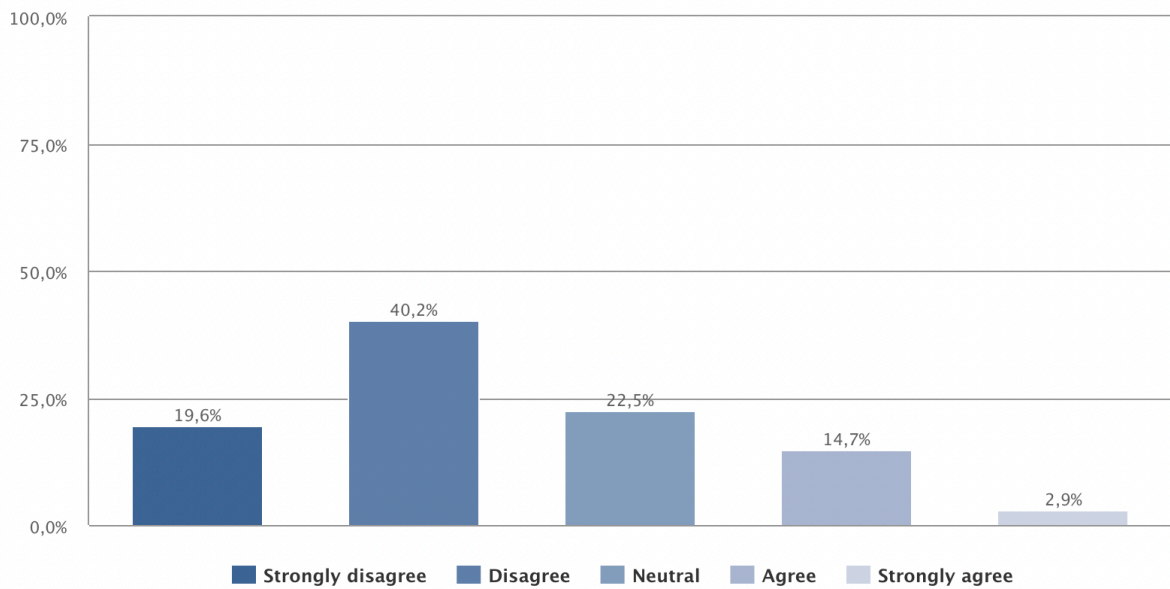


Figure 5-16. Results Question 7 Experimental Group (n=103)

The general belief in the truthfulness of environmental claims in advertising was very low, at less than 20% in the experimental group. 60% rejected the statement on the trustworthiness of claims. They generally did not trust such statements.

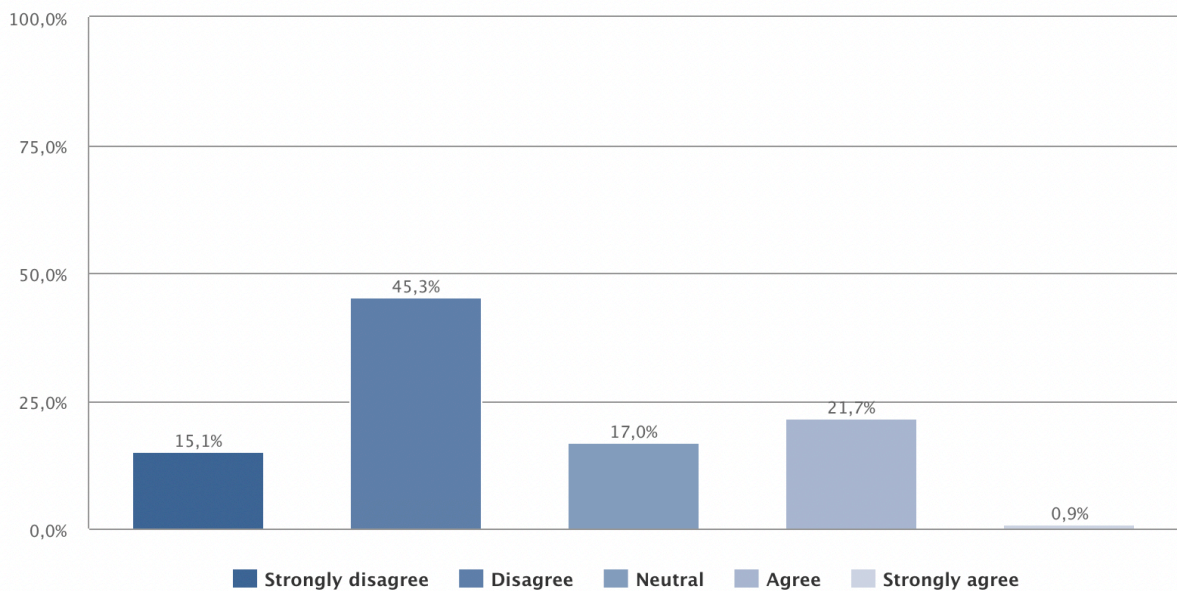


Figure 5-17. Results Question 7 Control Group (n=107)

In the control group, 60% were also opposed to the statement on the trustworthiness of claims. Just over 20% trusted environmental messages in ads in general.

Question 8: "The advertisement contains elements of greenwashing." Please state to what extent you agree with the statement.

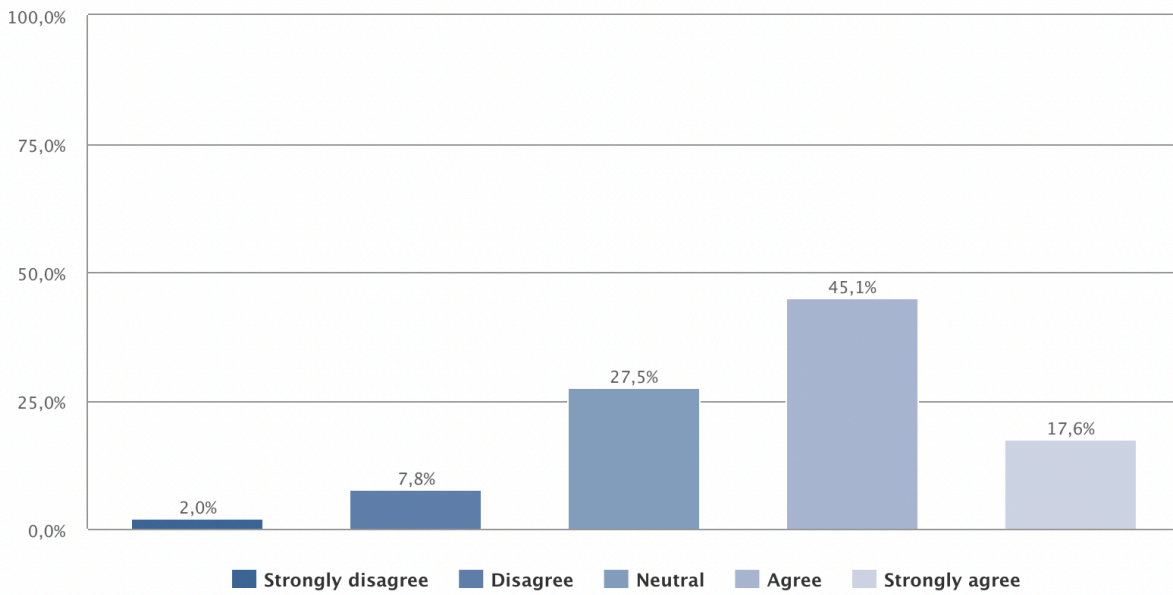


Figure 5-18. Results Question 8 Experimental Group (n=103)

In the experimental group, over 60% suspected that the advertising contains elements of greenwashing. Only 10% say that they did not accuse the ad content of greenwashing.

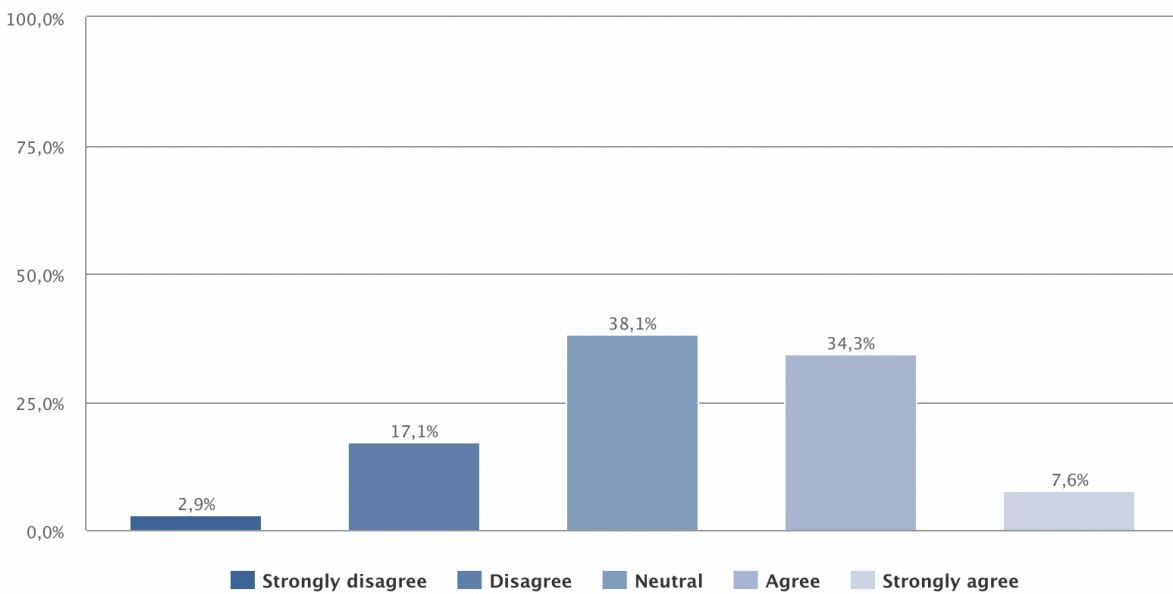


Figure 5-19. Results Question 8 Control Group (n=107)

In the control group, slightly more than 40% were sceptical and stated that the advertising contains greenwashing elements. 20% suspected no greenwashing at all.

Question 9: "I feel that being referred to further resources in the advertisement about the product's impact would increase my willingness to buy." Please state to what extent you agree with the statement.

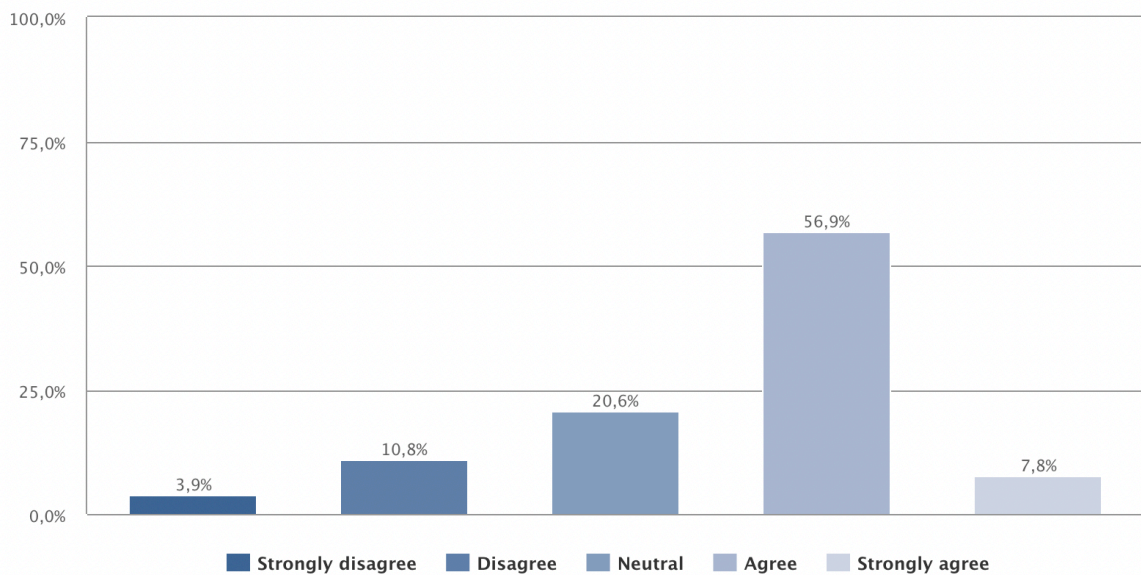


Figure 5-20. Results Question 9 Experimental Group (n=103)

In the experimental group, significantly more than half of the participants thought that the reference to further resources would have increased their willingness to buy.

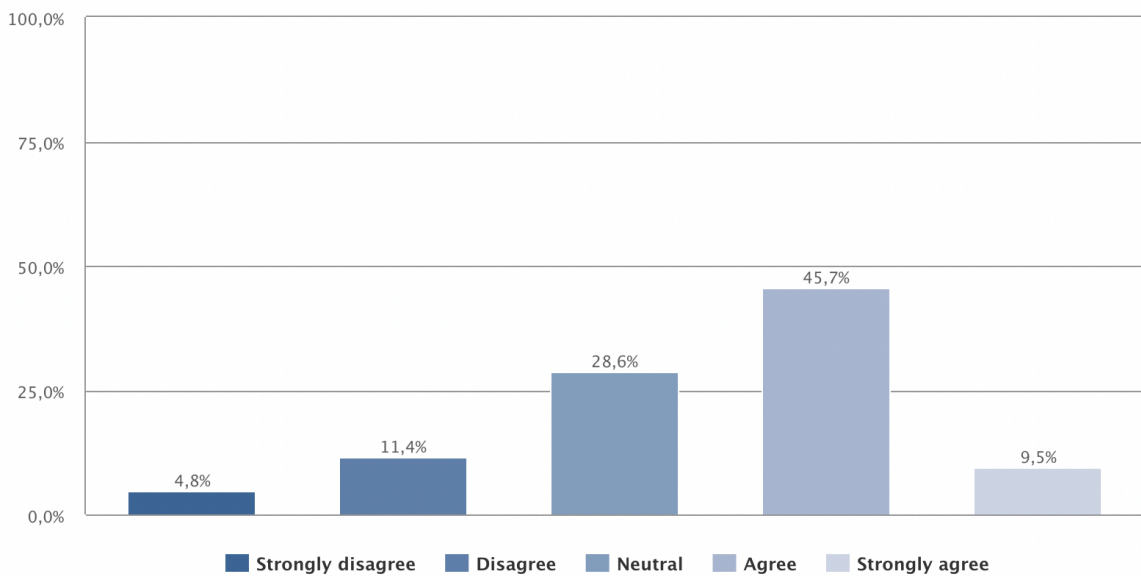


Figure 5-21. Results Question 9 Control Group (n=107)

In the control group, agreement with the statement about further resources and references was somewhat lower, but the majority also stated that this would have increased their willingness to buy.

The following part gives an overview of the tested hypotheses and highlights the most important findings. First of all, the argumentation of evaluation methods is covered, which is followed by an examination of the proposed hypotheses.

Which scale level the values of a Likert scale are to be assigned to is much discussed and disputed in empirical social research. Considering the values as metrical opens the possibility of applying parametric procedures, with greater statistical significance. However, it is questionable whether the distances between the response points can be regarded as equal and should therefore rather be considered ordinally scaled and thus not metric. Westermann (1985, pp. 265–274) has stated that Likert scales are acceptable as interval-scaled if they have 5 or 7 levels therefore if they are odd. It follows that equal distances are approximately guaranteed, and the measurement level can be considered interval-scaled, thus enabling the evaluation by parametric methods. De Winter and Dodou (2010, pp. 1–6) have proven in their study that parametric and non-parametric methods do not differ with regard to their probability of an alpha error when evaluating Likert-scale data. It can be concluded that Likert scales are usually assumed to be ordinally scaled in research, which makes the use of metric tests controversial. However, it is common in empirical social research to use parametric procedures with 5- or 7-level scales. Parametric statistics can be used with Likert data, small sample sizes, unequal variances, non-normal variances, and non-normal distributions without the risk of drawing erroneous conclusions (Norman, 2010, p. 631).

There are three mathematical prerequisites for the t-test: Firstly, the investigated characteristic is interval-scaled, secondly, the examined characteristic is normally distributed in the population and lastly, the population variances from which the two samples originate are the same (Rasch, 2006, p. 59). This assumption is important when estimating the dispersion of the distribution of line sample characteristics. If these conditions are met, the t-test procedure can be derived exactly mathematically. However, simulation studies show that the t-test still provides reliable information even if these prerequisites are violated. To ensure this, it is important that the samples of the two groups have approximately the same size and are not too small ($n_1 = n_2 > 30$). Only if the samples are smaller or significantly different in size is the result of a t-test erroneous if the prerequisites are violated (Rasch, 2006, p. 59). In summary, the t-test can be applied here because the experimental and control groups are approximately the same size, and the sufficiently large sample also vindicates an evaluation with parametric procedures for this analysis.

The Pearson correlation coefficient is used if it can be assumed that the values have an interval scale level, which means they are metric. For correlation analysis with ordinal scaled variables, the Spearman correlation coefficient is considered (Hauke & Kossowski, 2011, p. 87).

Based on the previous argumentation, parametric methods were applied for the data analysis of this thesis. Therefore, the t-test and Pearson's correlation coefficient were used for the evaluation to test the proposed hypotheses.

The first hypothesis tested is as follows and is based on the research question:

What impact do environmental claims have on consumers' reactance and purchase intention?

Hypothesis 1: *Environmental claims in advertisements have an impact on consumers' reactance and purchase intention.*

| Gruppe | | N | Mean | Std. Deviation | Std. Error Mean |
|--|-----------------------------|-----|------|----------------|-----------------|
| I feel an unpleasant arousal or pressured by the content of the advertisement. | With environmental claim | 102 | 2,16 | 1,041 | ,103 |
| | Without environmental claim | 106 | 1,88 | ,881 | ,086 |

Figure 5-22. Group Statistics for Consumer Reactance

To test this question, a t-test for independent samples was used. With the help of the t-test, it can be determined whether two groups differ from each other regarding their central tendency. Therefore, the mean values of the different answers were considered. Together with the test statistics, the descriptive statistics were examined to get a first impression of the mean differences. For example, for the item I feel an unpleasant arousal... (consumer reactance) noticeable mean differences between the groups could be determined. For group 1 the value was $M = 2.14$ ($SD = 1.058$) and for group 2 $M = 1.86$ ($SD = 0.895$). Using the t-test, it could be determined whether these differences between the groups were significant.

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|--|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | Lower | Upper | |
| I feel an unpleasant arousal or pressured by the content of the advertisement. | Equal variances assumed | 3,153 | ,077 | 2,093 | 206 | ,038 | ,280 | ,134 | ,016 | ,543 |
| | Equal variances not assumed | | | 2,087 | 197,757 | ,038 | ,280 | ,134 | ,015 | ,544 |

Figure 5-23. Independent Samples Test

For the item I feel an unpleasant arousal... a significant mean difference between the groups was found, $t(208) = 2.045$, $p = .042 < .05$

In the control group, a slightly stronger negative response tendency could be found for this item compared to the control group.

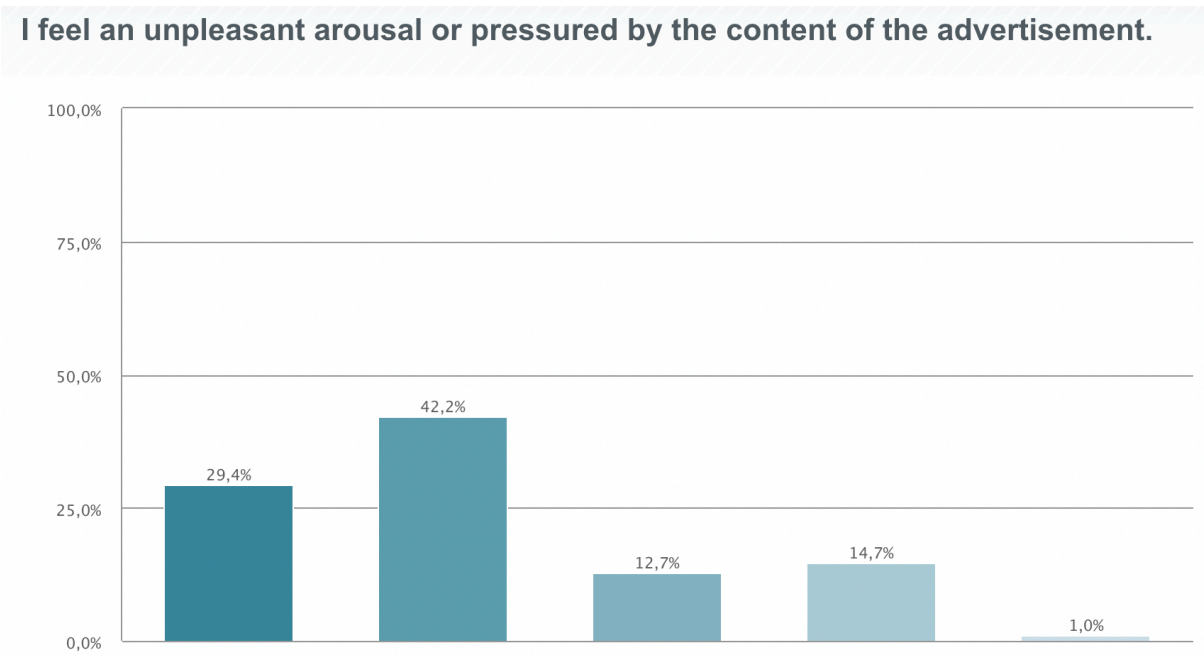


Figure 5-24. Frequency Data Experimental Group Consumer Reactance

15.7% of the respondents said they had felt unpleasant arousal, 12.7% chose the neutral response alternative and 71.6% disagreed with the item overall.

I feel an unpleasant arousal or pressured by the content of the advertisement.

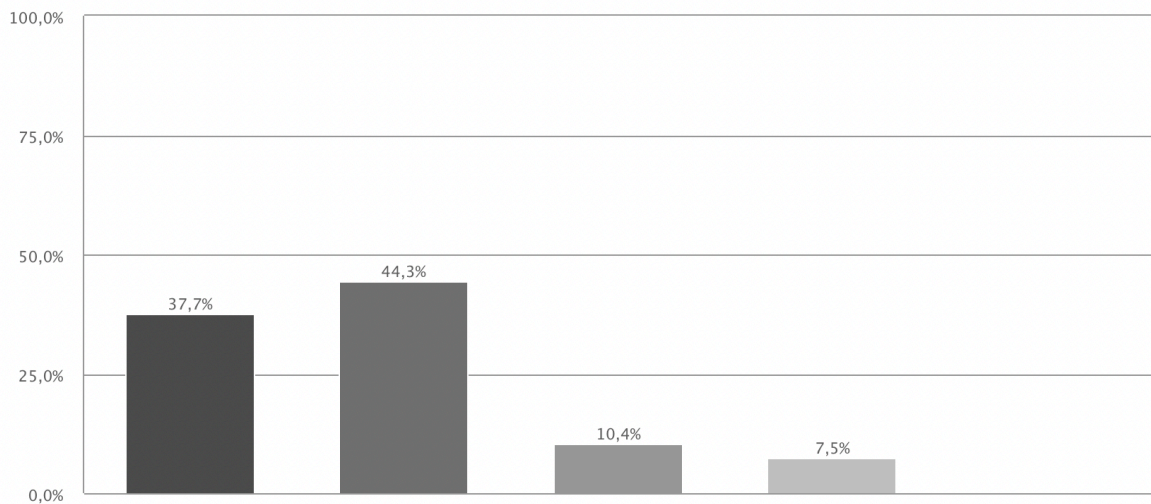


Figure 5-25. Frequency Data Control Group Consumer Reactance

7.5% of the people from the control group said they had felt negative arousal. 10.4% chose the neutral answer and 82% disagreed. Although the mean difference in this item was significant between the two groups, a similar response tendency could still be read based on the frequencies. Overall, the majority of respondents in both groups stated that they had not felt any negative arousal from the content of the advertisement.

I would rather buy a product that is advertised without an environmental claim than one being promoted as causing fewer carbon emissions and protecting the environment.

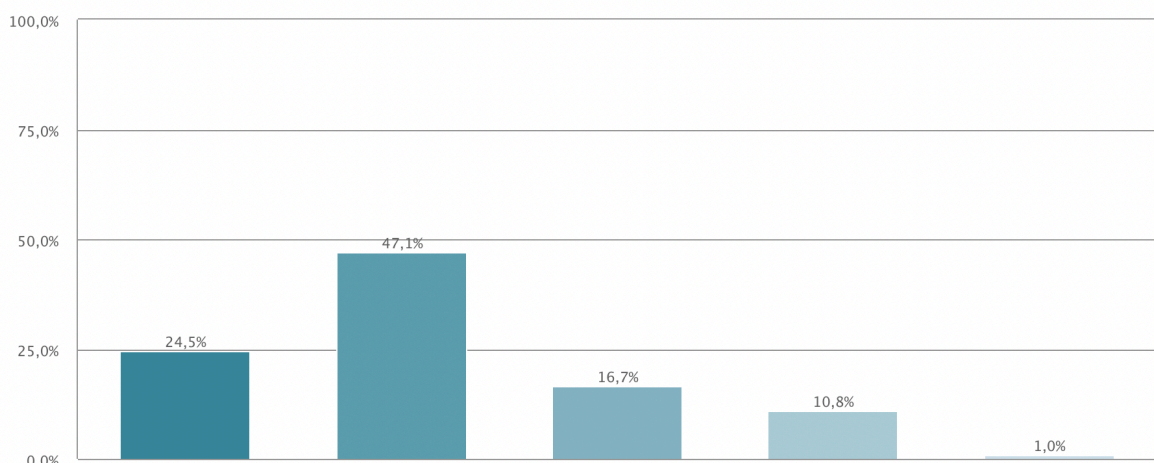


Figure 5-26. Frequency Data Experimental Group Purchase Intention

11.8% of the respondents agreed with the statement “I would rather buy a product that is advertised without an environmental claim than one being promoted as causing fewer carbon emissions and protecting the environment”. 71.6% disagreed with the item.

I would rather buy a product that is advertised without an environmental claim than one being promoted as causing fewer carbon emissions and protecting the environment.

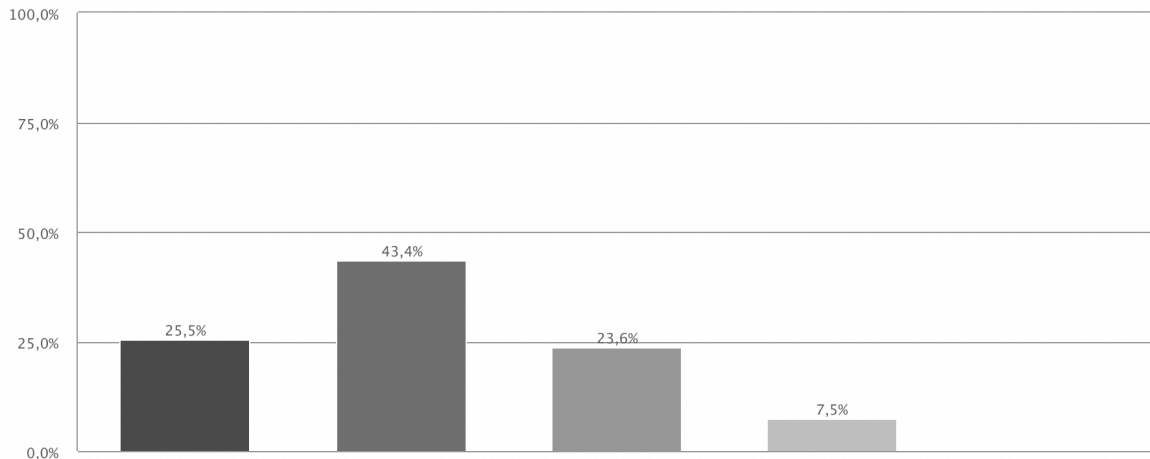


Figure 5-27. Frequency Data Control Group Purchase Intention

Within the control group, only 7.5% agreed with the item.

Hypothesis 2: If environmental claims in advertisements lead to consumers' reactance, there's a negative effect on purchase intention.

A strong positive correlation was found within the control group between the variables “My willingness to buy the product is impacted by the claim...” (claim impact) and “Are you likely to buy the displayed product...” (likeliness to buy) $r = .504^{**}$.

A moderate correlation was found between the variables “I feel an unpleasant arousal...” (consumer reactance) and “I feel my freedom of choice is limited...”. (consumer reactance) $r = .286^{**}$.

Within the experimental group, a strong correlation was also found between the items “My willingness to buy the product...” (claim impact) and “Are you likely to buy the displayed product...” likeliness to buy, $r = .608^{**}$.

A moderate correlation was also found between the variables “I feel an unpleasant arousal...” (consumer reactance) and “I feel my freedom of choice is limited...” (consumer reactance) $r = .287^{**}$. As well as between the variables “I feel an unpleasant arousal” (consumer reactance) and “I would rather buy a product that is advertised without an environmental claim...” (purchase intention), $r = .302^{**}$.

Based on the correlations examined within the experimental group, it could be assumed consumer reactance had a correspondingly negative influence on purchasing intention.

How can environmental claims in advertisements lead to psychological reactance of consumers against green marketing?

Hypothesis 3: Environmental claims in advertisements lead to the psychological reactance of consumers against green marketing.

The evaluation for this hypothesis has already been illuminated and covered by testing hypothesis 1 above. It can be summarized that the majority of the participants of the experimental and control group stated that they did not feel any negative arousal from the content of the advertisement. The research could not validate hypotheses 3. It follows that environmental claims did not lead to psychological reactance in consumers against green marketing under these conditions.

Hypothesis 4: Environmental claims in advertisements lead to the psychological reactance of consumers against green marketing if they do not believe the message is credible.

The correlation analysis for the experimental group showed that there was a moderate negative correlation between the two variables “I feel an unpleasant arousal or pressured by the content of the advertisement” (consumer reactance) and the variable “I trust that the message of the advertisement shown is credible” (credibility of the message), $r = -.316^{**}$. The higher the consumer reactance, the lower the credibility of the advertising message was assessed.

Therefore, a moderate correlation between the credibility of the message of the advertisement and the psychological reactance was given. Furthermore, this could have a negative effect on the perception of green marketing, which, however, would have to be investigated further.

Hypothesis 5: Environmental claims in advertisements as part of a green marketing strategy are not trusted by consumers.

| Gruppe | | N | Mean | Std. Deviation | Std. Error Mean |
|--|-----------------------------|-----|------|----------------|-----------------|
| I generally trust environmental claims in advertisements to be true. | With environmental claim | 102 | 2,41 | 1,056 | ,105 |
| | Without environmental claim | 106 | 2,48 | 1,026 | ,100 |

Figure 5-28. Group Statistics for Trustworthiness of Environmental Claims

Based on the test statistic, no significant mean difference between the groups could be found $t(206) = -.481, p = .631$. The similar, negative response tendency of both groups is graphically presented by bar charts.

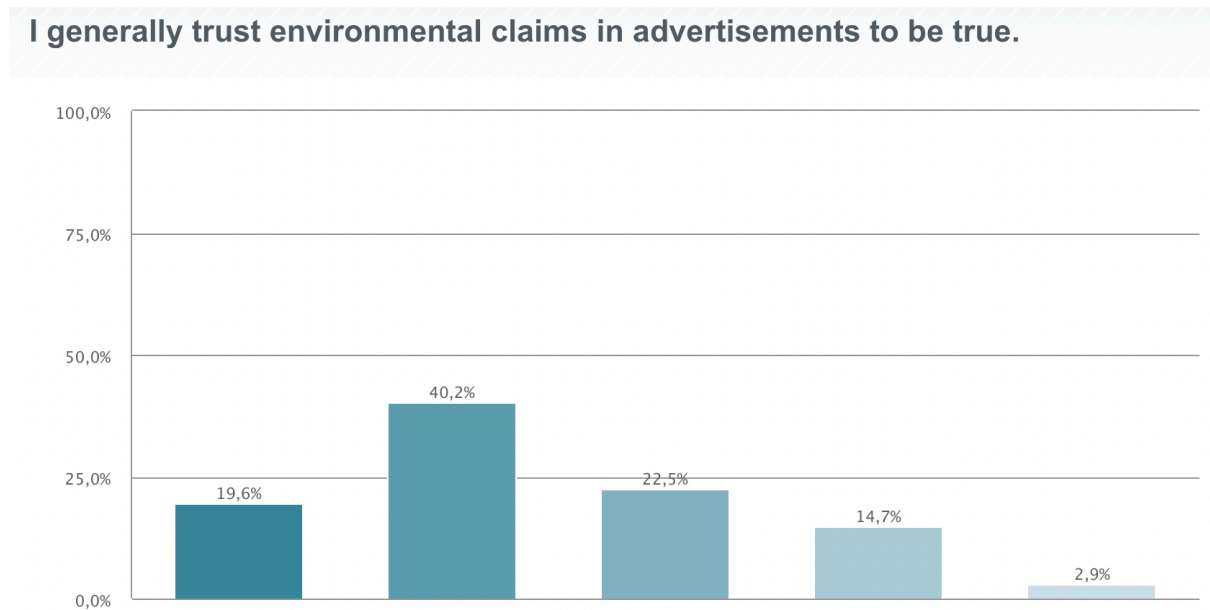


Figure 5-29. Frequency Data Experimental Group Trustworthiness Environmental Claims

17.6% of the people in the experimental group said that they generally trust environmental claims in advertising. 59.8%, on the other hand, stated that they did not trust them.

I generally trust environmental claims in advertisements to be true.

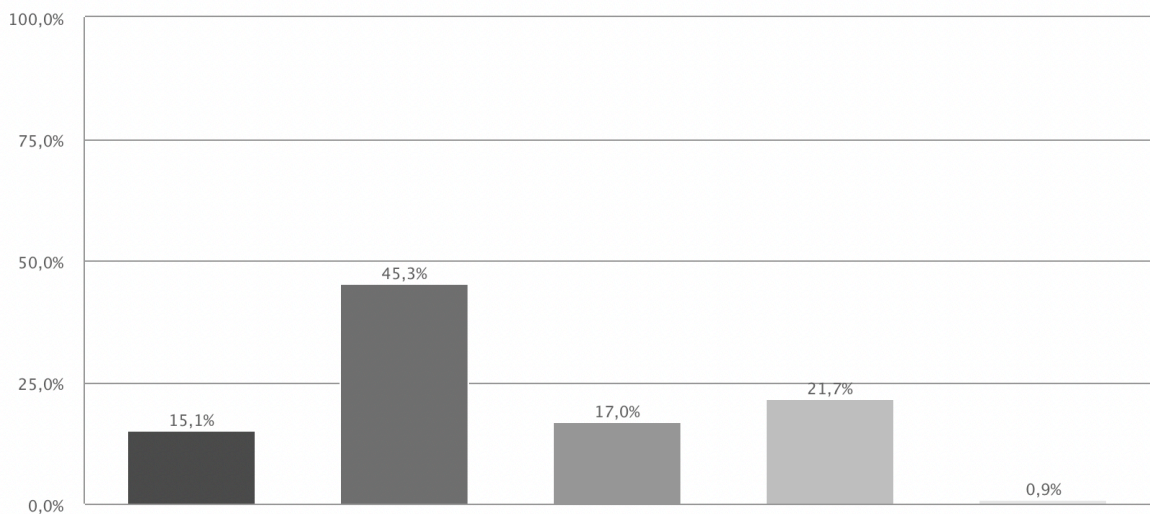


Figure 5-30. Frequency Data Control Group Trustworthiness of Environmental Claims

Within the control group, over 20% said they believed environmental claims in advertising were true, while 60.4% said they did not.

How can green marketers successfully make use of environmental claims in advertisements?

Hypothesis 6: *Green marketers can successfully make use of environmental claims when consumers are not suspecting elements of greenwashing in the advertisement.*

To answer this question, the correlation between items 1 (likeliness to buy), 5 (purchase intention) and 8 (suspicion of greenwashing) was reviewed. A moderate negative correlation was found between the variables “The advertisements contain elements of greenwashing...” and “Are you likely to buy the product based solely on the advertisement” $r = -.349^{**}$.

Furthermore, the correlation of the variables suspicion of greenwashing and credibility of the message was reviewed. Within the experimental group, there was a negative correlation here, $r = -.427^{**}$. The correlation means that the greater the suspicion of greenwashing among consumers was, the less they trusted the credibility of the advertising message.

Hypothesis 7: *Green marketers can successfully make use of environmental claims in advertisements if they provide further resources about the product's impact on consumers.*

To investigate this question, the response tendencies of both groups were reviewed. In the experimental group, 64.7% of the respondents said they agreed with the item. Only 14.7% said they disagreed and 20.6% chose the neutral answer alternative.

I feel that being referred to further resources in the advertisement about the product's impact would increase my willingness to buy.

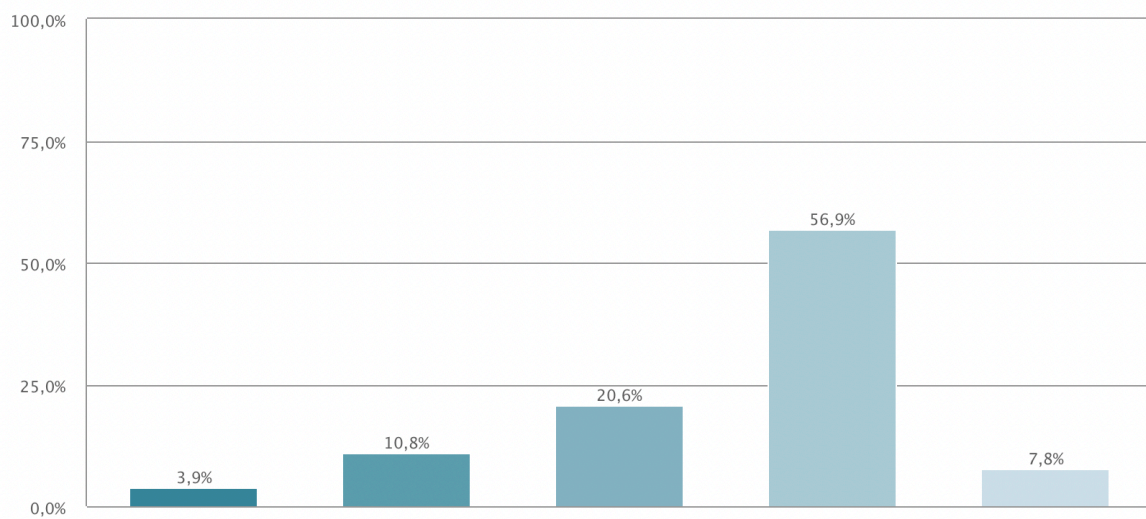


Figure 5-31. Frequency Data Experimental Group Further Resources

Within the control group, a similar response behaviour could be observed with 55.2% who agreed with the item, 16.2% who disagreed, and 28.6% who gave a neutral answer. Based on the frequency distribution, the majority of people agreed that green marketers would benefit from backing up their environmental claims in advertising with further sources and information.

I feel that being referred to further resources in the advertisement about the product's impact would increase my willingness to buy.

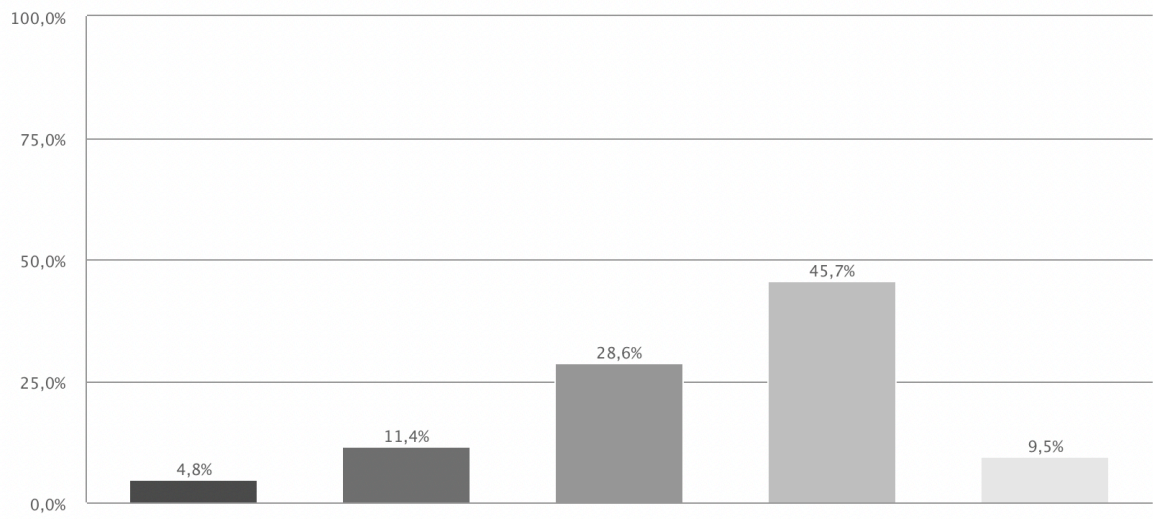


Figure 5-32. Frequency Data Control Group Further Resources

To conclude the research design part of the thesis, the results of the hypotheses tested are summarized in the table below.

| | | |
|---------------------|--|----------------------|
| Hypothesis 1 | Environmental claims in advertisements have an impact on consumers' reactance and purchase intention. | <i>Not validated</i> |
| Hypothesis 2 | If environmental claims in advertisements lead to consumers' reactance, there is a negative effect on purchase intention. | <i>Validated</i> |
| Hypothesis 3 | Environmental claims in advertisements lead to psychological reactance of consumers against green marketing. | <i>Not validated</i> |
| Hypothesis 4 | Environmental claims in advertisements lead to psychological reactance of consumers against green marketing, if they do not believe the message is credible. | <i>Validated</i> |
| Hypothesis 5 | Environmental claims in advertisements as part of a green marketing strategy are not trusted by consumers. | <i>Validated</i> |
| Hypothesis 6 | Green marketers can successfully make use of environmental claims when consumers are not suspecting elements of greenwashing in the advertisement. | <i>Validated</i> |
| Hypothesis 7 | Green marketers can successfully make use of environmental claims in advertisements if they provide further resources about the product's impact to consumers. | <i>Validated</i> |

Table 6. Overview results of the tested hypotheses

6 Empirical Research Questions

This chapter provides an overview of the empirical research questions and answers them conclusively based on the literature findings and the results of the experimental study presented in the previous chapter.

The first empirical research question which will be elaborated on and answered is the following:

How can environmental claims in advertisements lead to the psychological reactance of consumers against green marketing?

It is not validated by this experimental study that environmental claims in advertisements lead to the psychological reactance of consumers against green marketing. From this arises the assumption that the perceived influence of the environmental claim used in the designed advertisement for the questionnaire was not too high and therefore not strong enough to trigger reactance within the respondents. Based on this, it can be assumed that the effectiveness of the influence of the environmental claim was not lowered (Raab et al., 2010a, p. 70).

However, one must consider that environmental claims in advertisements lead to the psychological reactance of consumers against green marketing if they do not believe the message is credible. The hypothesis was validated based on the research of this thesis. Reference should be made here to Mayer, Scammon, and Zick (1993, pp. 698–703) who have stated that the credibility of environmental claims is relatively low. Credibility is the key to minimizing scepticism. The use of credible environmental claims helps to avoid triggering reactance and its effects among consumers, like doing the opposite or changing the opinion in the opposite direction, restoring individual freedom, or even aggression. Establishing trust and credibility helps to ensure that consumers can distinguish between green marketing and greenwashing in advertising (Grimm & Malschinger, 2021, pp. 286–287).

The most important finding of this research is that environmental claims in advertisements as part of a green marketing strategy are not trusted by consumers. Trust results from repeating positive experiences with a company or product and consumers assuming that this behaviour will be reproduced in the future (Grimm & Malschinger, 2021, pp. 289–290). However, one must take into account that the study was based on a generic and no-name product. The

unbranded water bottle was not known to the participants from any previous advertising and there was no previous experience with the brand or product that could have inspired trust. The question asked in the survey regarding consumers' trust in environmental claims referred to advertising with environmental claims in general. However, this may have been influenced by the previous questions about the product shown and would need to be investigated in further research. It could be examined how the result would change if a product was used in the graphic advertisements to which the participants have a certain connection and level of trust based on previous experiences with the product or brand.

The second empirical research question that will be answered is the following:

How can green marketers successfully make use of environmental claims in advertisements?

Based on the results, it remains to be stated that green marketers can successfully make use of environmental claims when consumers are not suspecting elements of greenwashing in the advertisement. The success of a green marketing campaign depends on many different factors. In order to assess an advertisement in terms of the consistency of the message with the actions of the company, questions such as the following need to be considered: Is the goal of the advertisement well defined? Is the message consistent with the values and actions of the company? Could consumers suspect greenwashing based on the content of the advertisement? Has the appropriate medium been chosen? Is there a comprehensive depth of information that the advertisement can refer to? Is the information correct from a sustainable perspective? Has the environmental claim been backed up with evidence? Are there further resources provided about the product's ecological impact? Is self-reflection of the company on the current situation also presented and shared? Does the advertisement have the potential to be discursive? Does the campaign show an openness to participation? (Grimm & Malschinger, 2021, p. 290)

Furthermore, it can be concluded from the findings that providing further resources to consumers about the product's impact supports the successful use of environmental claims by green marketers. Which kind of resources and in which form they are integrated, or consumers should be referred to would still have to be examined. To clarify this question, further research is needed in the field of additional sources in advertising campaigns as part of green marketing.

Nowadays, greenwashing campaigns are being exposed by consumers and shared on social networks more frequently. There may be widespread buying boycotts in response as the worst case. Therefore, it is essential for green marketers to make an effort to ensure the credibility of their campaigns and to invest a lot of time and know-how into communication efforts (Grimm & Malschinger, 2021, pp. 293–294). Credible campaigns beyond noticeable greenwashing campaigns are the duty of green companies and their marketing executives. Without credibility, there is no trust. The creation of trust between the company and the consumers must be a central entrepreneurial goal and encompasses all areas of action not only marketing activities. Authentic action implies doing what the firm promises with any environmental claim - internally and externally.

From these examples, it can be stated that green marketing should not be an isolated function. It encompasses all stakeholders and all business processes across the entire value chain and organisation (Grimm & Malschinger, 2021, p. 299). All processes must be organized in a sustainable manner. In addition, high quality of transparency must also be established, otherwise, green marketing will not fulfil its claim to itself.

Overall, it can be concluded that the success of advertisements with environmental claims will fail to materialize if transparency is not guaranteed. Based on the research results, it is clear that green marketers should rule out the suspicion of greenwashing in advertising and provide consumers with further resources to ensure the credibility of the environmental claim.

The third and last research question which will be investigated and answered is the main research question of this thesis:

What impact do environmental claims have on consumers' reactance and purchase intention?

It remains to be stated that the research could not validate that environmental claims in advertisements have an impact on consumers' reactance and purchase intention. However, one must take into account that environmental claims in ads lead to consumers' reactance if there is a negative effect on purchase intention. Purchase intention can be increased by branding in terms of environmental friendliness and positioning on environmental issues. Consumers with higher environmental awareness have a higher purchase intention for green products (Siyal et

al., 2021, p. 14). In order to determine how much influence environmental claims have on purchase intention alone, further research would be needed in this area.

The goal of a product that is advertised with an environmental claim is to appeal to consumers. If the intention to influence is too obvious, consumers feel restricted in their freedom of choice. This can result in a weaker communication effect or have a negative impact on the attractiveness of the product and thus also on the purchase intention (Raab et al., 2010b, p. 72). Herein lies the reason for the result, that environmental claims do not have an impact on consumer reactance and purchase intention. It follows that the intensity of influence due to the environmental claim in the experimental study could have been too low to result in a significant impact on consumers' reactance. It can be assumed that the influence due to the environmental claim of the advertisement was perceived less as such and thus less reactance got triggered among survey participants (Raab et al., 2010a, pp. 72–74). To clarify this question, further research is needed in the field of the intensity of influence of environmental claims. With regard to further elaboration of this topic, an experimental study with different levels of intensity of the environmental claim could be carried out.

A noticeable form of influence is essential to achieve an effect on consumers, namely the influencing effect. The persuasive character of the message triggers the effect. Thus, an influencing effect in the direction of the message and a reactance effect in the opposite direction of the message is always to be expected. It can be concluded that the stronger the perceived influence, the stronger the triggered reactance and the lower the effectiveness of the influence (Raab et al., 2010a, p. 70). Advertisements with environmental claims can backfire if the perceived pressure among consumers is too high.

The psychological reactance should be taken into account and the pressure that the advertising creates with it when choosing the environmental claim as part of the marketing campaign planning. If the message creates a too high conviction that the product is good for the environment and the environmental claim is perceived as untrustworthy, the purchase intention will be negatively influenced. As a result, reactance effects can also be triggered. Consumers could consciously decide against the product based on the environmental claim in the advertisement.

In summary, it can be said that green marketers should consider transparency, authenticity, trust, and credibility as differentiators between greenwashing and green marketing among consumers. It could trigger suspicion of greenwashing, reactance effects, and a decreased purchase intention resulting from it, if these factors are not given and are credibly conveyed in the advertising message through the environmental claim.

7 Conclusion

In the final part of the thesis, the most relevant findings of the research are summarized and interpreted. The research question is answered thoroughly, which is followed by the limitations of the study. It covers questions that have arisen from the findings and suggestions for further research. An outlook with assumptions about the future and relevance of the research topic concludes the work.

7.1 Resume

The objective of the present work is to examine how environmental claims influence consumers' reactance and purchase intention. The focus of the considerations is to investigate if green marketing advertising material can eventually backfire by leading to green marketing reactance, which is psychological resistance to untrustworthy green marketed products and causes consumers to assume it is greenwashing. The aim of the work is to give insights into how green marketers can optimise their advertisements and elicit the desired responses to environmental claims so that consumers conceive the message positively.

This thesis has critically examined the factors which influence consumers' differentiation between green marketing and greenwashing and what causes the belief in green marketing or the suspicion of greenwashing. It can be concluded that authenticity, transparency, trust, and consumers' identification with the message are essential factors that contribute to the credibility and effectiveness of green marketing and thus also to environmental claims. Furthermore, psychological reactance should be considered by marketers when using an environmental claim in advertising as part of a green marketing strategy. The theory elaborated in this work describes why consumers recover their freedom of choice by consciously deciding against the green product if they perceive the persuasive pressure from the environmental claim in the advertising used to be too high. Here it becomes clear that green marketing can backfire if psychological reactance is triggered by environmental claims. With the given conditions, this study could not prove that environmental claims lead to psychological reactance among consumers. It can be assumed that the pressure caused by the claim used was too low. To clarify this question, further research is needed in the field of reactance and claims in the context of green marketing.

However, one must take into account that environmental claims lead to consumers' reactance against green marketing if the message is assumed to be untrustworthy. This is one of the most important findings of this research. Based on results, it remains to be stated that the success of advertising with environmental claims can be ensured through transparency and by providing consumers with further resources and references. It follows that ensuring the credibility of the environmental claim helps to avoid reactance effects and increase the intention to buy among consumers. Green marketers can successfully make use of environmental claims as part of their green marketing strategy if they ensure the consistency of the message with the company's activities to guarantee that consumers are not suspecting elements of greenwashing in the advertisement. Providing further resources to consumers about the impact of the product supports the prosperous use of environmental claims by green marketers. The results of this study could benefit marketers as they incorporate green marketing into the promotion of their products. Based on the results, it can be stated that the trust in environmental claims in advertisements among consumers is relatively low. From this arises that these claims should only be used if there is a sufficient basis of environmental responsibility by the company.

Companies can protect themselves from greenwashing exposure and boycott by consumers by investing time and know-how into all communication efforts and ensuring credibility across the entire organisation. Building trust between the company and consumers is a central objective of successful green marketing and encompasses all areas of action, not just marketing measures. The triggering of reactive effects and the negative influence on purchase intent among consumers through environmental claims can be avoided through transparency and a high level of credibility. Based on the research findings, it remains to be stated that green marketers should provide consumers with additional content and further resources beyond the environmental claim to ensure credibility and the success of the advertisement.

In green marketing, information asymmetry regarding sustainable quality criteria will always remain a central issue and thus a major challenge. Marketing managers should have this topic on their top agenda. Ultimately, overcoming information asymmetry always forms the bridge of trust to the consumer. Therefore, building, maintaining, and deepening consumers' trust in the product and company is a central task in the future (Grimm & Malschinger, 2021, p. 45).

7.2 Limitation

The main limitation of this work is the use of a convenient online sample. Since the data of the research was collected with an online questionnaire, the survey only covers the part of the population that can be reached electronically and is practised using it (Atteslander et al., 2010, p. 166). A real random sample that allows generalizations to be made to the population and is thus described as representative is hardly possible with online surveys (Atteslander et al., 2010, p. 168). A more diverse sample would be recommended for further research to increase the possibility to generalise the findings.

Another limitation to point out in this research is the choice of a generic no-name product that covers basic daily needs. Regarding further elaboration, the outcomes of a branded product under similar conditions could be investigated to examine if the results differ between branded and non-branded products. The experimental study could also be carried out for high-involvement products or conducted as a field experiment instead of an online survey to further elaborate on the impact of environmental claims on consumers' reactance and purchase intention in the everyday buying situation (Carlson et al., 1993, pp. 27–39).

In addition, the impact of different geographical origins of the participants on the results could be examined. Many different demographic characteristics could also be surveyed and the differences in the answers in terms of gender, age, income, education level, etc. could be investigated for correlations. Moreover, consumers' environmental knowledge and involvement and the differences in responses to environmental claims could be examined. An example of a potential further research question could be that consumers who are knowledgeable about current environmental topics are more likely to identify greenwashed advertisements and that untrustworthy environmental claims trigger reactance effects in them. To clarify this question, this correlation would have to be investigated in more detail with further research.

Regarding further elaboration of the effects of environmental claims on consumers' reactance and purchase intention in advertising based on the research, the various types of claims could be examined. This experimental survey only covered environmental claims and their impact. According to Carlson, Grove & Kangun (1993, pp. 27–39) there are four other types of claims in addition to environmental ones: product-oriented claims, which focus on product characteristics (e.g. recyclable), process-oriented with regard to the production process or recycled raw

material used, image-oriented ones linked to charity activities (e.g. aid projects), and lastly a combination of all claims mentioned could be used for further research. The simultaneous investigation of several different types of environmental claims is also a promising option for further research on the topic. From the findings on the theory of psychological reaction arises the question of how to determine the intensity of convincing pressure of environmental claims. Further investigation of the topic could cover an experimental study that confronts participants with different levels of intensity of the environmental statement and measures the impact on reactance and purchase intention.

In summary, it can be stated that this work has proven that there is still a lot of research potential on claims and their impact on consumers' behaviour in advertising.

7.3 Outlook

Consumers are becoming increasingly environmentally aware and the demand for green products and services has increased significantly over the last decade (Afridi, Shahjehan, Haider, Gul & Khan, 2021, p. 344). Environmental advertising and eco-labelling are booming (Riede & Hofer, 2022). Greenwashing with exaggerated or misleading environmental claims is also on the rise.

In the summer of 2022, the Coca-Cola Company introduced new packaging for their soft drink Sprite to make it easier to recycle (Lynch, 2022). With this change, the company wants to become more environmentally friendly as part of Coca-Cola's vision of "A world without waste". Their goal is to take back one used bottle for every bottle sold worldwide by 2030. However, the company was named the world's biggest plastic polluter in 2021. Greenpeace, a well-known global environmental organisation, dismissed Coca-Cola's vision as "greenwashing", as collecting one bottle for every bottle sold and changing the packaging raw material to more easily recyclable material is not enough to counteract the pollution caused by plastic bottles (Lynch, 2022).

The new appearance got advertised with the message "New Bottle. Same Sprite." and the claim "Now made with clear plastic to help this bottle be remade." The content used in the campaign

to promote the new look of Sprite bottles is a mix of product-, process- and environment-oriented claims. Here the question arises of how this change in packaging and the associated advertising campaign will affect consumers' reactance and purchase intention. Further research could address how much influence statements and reports by environmental organisations have on consumer behaviour.

The European Commission (2022) is considering a general ban on greenwashing, as shown by a European Union directive proposed this year. The proposed rules are intended to give consumers greater protection against unreliable or false environmental claims and to completely ban greenwashing practices designed to mislead consumers.

First, the list of product characteristics about which a trader cannot mislead consumers is expanded to cover the environmental or social impact, as well as the durability and reparability. Then, it also adds new practices that are considered misleading after a case-by-case assessment, such as making an environmental claim related to future environmental performance without clear, objective and verifiable commitments and targets, and without an independent monitoring system. (European Commission, 2022)

The updated list of commercial practices which will be prohibited includes making unclear environmental claims where the environmental friendliness of the product cannot be verified, for example, “environmentally friendly”, “eco“, or “green“ to make consumers believe that there is sufficient environmental performance (European Commission, 2022). Moreover, making environmental claims which address the product as a whole, while only one aspect of it is environmentally friendly, will be forbidden as well.

It can be assumed that greenwashing will be increasingly scrutinized by courts, authorities, and consumers. Since it takes a lot of time and resources to build up a credible green reputation for a brand or company, the risk of greenwashing should be given special consideration in any marketing communication efforts (Riede & Hofer, 2022).

From these recent examples, it becomes clear that consumers' differentiation of claims in advertisements between green marketing and greenwashing and their impact on consumer behaviour is of relevance for further research. How these future laws will affect consumers and their behaviour, what effect these changes will have on companies, and the credibility of green marketing, once they are in place, is a promising field of continuing research on this topic.

Overall, it can be stated that the findings and further investigation of environmental claims and their effects on consumers' reactance and purchase intention are very timely and relevant for green marketers in 2022 and in the decades to come.

8 List of Literature

- Afridi, S. A., Shahjehan, A., Haider, M., Gul, S. & Khan, W. (2021). Generativity and green purchase behavior: The role of environmental concern and pro-social attitude. *Humanities & Social Sciences Reviews*, 9(2), 344–357. Available at <https://doi.org/10.18510/hssr.2021.9234>
- Ahmad, W. & Zhang, Q. (2020). Green purchase intention: Effects of electronic service quality and customer green psychology. *Journal of Cleaner Production*, 267(122053), 1–17. Available at <https://doi.org/10.1016/j.jclepro.2020.122053>
- Akturan, U. (2018). How does greenwashing affect green branding equity and purchase intention? An empirical research. *Marketing Intelligence & Planning*, 36(7), 809–824. Available at <https://doi.org/10.1108/MIP-12-2017-0339>
- Ankit, G. & Mayur, R. (2013). Green marketing: Impact of green advertising on consumer purchase intention. *Advances in Management*, 6(9), 14–17.
- Ansar, N. (2013). Impact of green marketing on consumer purchase intention. *Mediterranean Journal of Social Sciences*, 4(11), 650–655. Available at <https://doi.org/10.5901/mjss.2013.v4n11p650>
- Assael, H. (1987). *Consumer behavior and marketing action* (3rd ed.). Boston, MA: Kent Pub. Co.
- Atteslander, P., Cromm, J., Grabow, B., Klein, H., Maurer, A. & Siegert, G. (2010). *Methoden der empirischen Sozialforschung (ESV basics)* (13. Aufl.). Berlin: Erich Schmidt Verlag.
- Bhalerao, V. R. & Deshmukh, D. A. (2015). Green marketing: Greening the 4 Ps of marketing. *International Journal of Knowledge and Research in Management & E-Commerce*, 5(2), 5–8.
- Braga Junior, S., Martínez, M. P., Correa, C. M., Moura-Leite, R. C. & Da Silva, D. (2019). Greenwashing effect, attitudes, and beliefs in green consumption. *RAUSP Management Journal*, 54(2), 226–241. Available at <https://doi.org/10.1108/RAUSP-08-2018-0070>
- Brehm, S. S. & Brehm, J. W. (2013). *Psychological reactance: A theory of freedom and control*. New York, NY: Academic Press.
- Caldas, M. V. de A., Veiga-Neto, A. R., Guimarães, L. G. de A., Castro, A. B. C. de & Pereira, G. R. B. (2021). Greenwashing in environmental marketing strategy in the Brazilian furniture market. *Revista de Economia e Sociologia Rural*, 59(3), 1–19. Available at <https://doi.org/10.1590/1806-9479.2021.225336>
- Carlson, L., Grove, S. J. & Kangun, N. (1993). A content analysis of environmental advertising claims: A matrix method approach. *Journal of Advertising*, 22(3), 27–39. Available at <https://doi.org/10.1080/00913367.1993.10673409>

- Charter, M. (Ed.). (2017). *Greener marketing: A responsible approach to business*. London: Routledge. Available at <https://www.taylorfrancis.com/books/9781351283519>
- Cherry, M. A. & Sneirson, J. F. (2012). Chevron, greenwashing, and the myth of “green oil companies.” *Journal of Energy, Climate, and the Environment*, 3, 133–153.
- Delmas, M. A. & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, 54(1), 64–87. Available at <https://doi.org/10.1525/cmr.2011.54.1.64>
- de Freitas Netto, S. V., Sobral, M. F. F., Ribeiro, A. R. B. & Soares, G. R. da L. (2020). Concepts and forms of greenwashing: a systematic review. *Environmental Sciences Europe*, 32(1), 1–19. Available at <https://doi.org/10.1186/s12302-020-0300-3>
- European Commission (2022, March). *Circular Economy: Commission proposes new consumer rights and a ban on greenwashing*. Available at https://ec.europa.eu/commission/presscorner/detail/en/IP_22_2098
- Furlow, N. E. (2010). Greenwashing in the new millennium. *The Journal of Applied Business and Economics*, 10(6), 22.
- Grant, J. (2007). *The Green Marketing Manifesto*. Chichester: John Wiley & Sons.
- Grant, J. (2020). *Greener Marketing*. Chichester: John Wiley & Sons.
- Grimm, A. & Malschinger, A. (2021). *Green Marketing 4.0*. Wiesbaden: Springer Gabler. Available at <https://doi.org/10.1007/978-3-658-03698-0>
- Hauke, J. & Kossowski, T. (2011). Comparison of values of Pearson’s and Spearman’s correlation coefficients on the same sets of data. *Quaestiones geographicae*, 30(2), 87–93. Available at <https://doi.org/10.2478/v10117-011-0021-1>
- Hoyer, W. D., MacInnis, D. J. & Pieters, R. (2013). *Consumer behavior* (6th ed.). Mason, OH: South-Western Cengage Learning.
- Hoyer, W. D., MacInnis, D. J., Pieters, R., Chan, E. & Northey, G. (2021). *Consumer behaviour* (2nd Asia-Pacific ed.). Melbourne: Cengage Australia.
- Hussain, S. S. (2008). Green consumerism and ecolabelling: A strategic behavioural model. *Journal of Agricultural Economics*, 51(1), 77–89. Available at <https://doi.org/10.1111/j.1477-9552.2000.tb01210.x>
- Joshi, Y. & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, 3(1–2), 128–143. Available at <https://doi.org/10.1016/j.ism.2015.04.001>
- Katrandjiev, H. (2016). Ecological marketing, green marketing, sustainable marketing: Synonyms or an evolution of ideas. *Economic Alternatives*, 7(1), 71–82.

- Kernis, M. H. & Goldman, B. M. (2006). A multicomponent conceptualization of authenticity: Theory and research. *Advances in Experimental Social Psychology* (Volume 38, pp. 283–357). Available at [https://doi.org/10.1016/S0065-2601\(06\)38006-9](https://doi.org/10.1016/S0065-2601(06)38006-9)
- Kimmel, A. J. (2018). *Psychological foundations of marketing: the keys to consumer behavior* (2nd ed.). London: Routledge. Available at <https://doi.org/10.4324/9781315436098>
- Kotler, P., Kartajaya, H. & Setiawan, I. (2017). *Marketing 4.0: moving from traditional to digital*. Hoboken, NJ: Wiley.
- Leonidou, C. N., Katsikeas, C. S. & Morgan, N. A. (2013). “Greening” the marketing mix: Do firms do it and does it pay off? *Journal of the Academy of Marketing Science*, 41(2), 151–170. Available at <https://doi.org/10.1007/s11747-012-0317-2>
- Liao, Y.-K., Wu, W.-Y. & Pham, T.-T. (2020). Examining the moderating effects of green marketing and green psychological benefits on customers’ green attitude, value and purchase intention. *Sustainability*, 12(18), 7461. Available at <https://doi.org/10.3390/su12187461>
- Luchs, M. G., Naylor, R. W., Irwin, J. R. & Raghunathan, R. (2010). The sustainability liability: Potential negative effects of ethicality on product preference. *Journal of Marketing*, 74(5), 18–31. Available at <https://doi.org/10.1509/jmkg.74.5.18>
- Lynch, E. (2022, August). Sprite will grüner werden – und verabschiedet sich deshalb von der grünen Flasche. Available at <https://www.nzz.ch/panorama/sprite-will-gruener-werden-und-verabschiedet-sich-deshalb-von-der-gruenen-flasche-ld.1695759>
- Lyon, T. P. & Montgomery, A. W. (2015). The means and end of greenwash. *Organization & Environment*, 28(2), 223–249. Available at <https://doi.org/10.1177/1086026615575332>
- Mahmoud, T. O. (2019). Green marketing: A marketing mix concept. *International Journal of Electrical, Electronics and Computers*, 4(1), 20–26. Available at <https://doi.org/10.22161/eec.4.1.3>
- Mayer, R. N., Scammon, D. L. & Zick, C. D. (1993). Poisoning the well: Do environmental claims strain consumer credulity? *ACR North American Advances*, 20, 698–703.
- Moisander, J. (2007). Motivational complexity of green consumerism. *International Journal of Consumer Studies*, 31(4), 404–409. Available at <https://doi.org/10.1111/j.1470-6431.2007.00586.x>
- Mukonza, C., Hinson, R. E., Adeola, O., Adisa, I., Mogaji, E. & Kirgiz, A. C. (Eds.). (2021). *Green Marketing in Emerging Markets: Strategic and Operational Perspectives*. Cham: Springer Nature. Available at <https://doi.org/10.1007/978-3-030-74065-8>
- Norman, G. (2010). Likert scales, levels of measurement and the “laws” of statistics. *Advances in Health Sciences Education*, 15(5), 625–632. Available at <https://doi.org/10.1007/s10459-010-9222-y>

- Ottman, J. A. (2017). *The new rules of green marketing: Strategies, tools, and inspiration for sustainable branding*. London: Routledge. Available at <https://doi.org/10.4324/9781351278683>
- Papasabbas, L., Muntschick, V., Schuldt, C., Pfuderer, N. & Seitz, J. (2019). *Neo-Ökologie: der wichtigste Megatrend unserer Zeit (Trendstudie)*. Frankfurt am Main: Zukunftsinstitut.
- Parguel, B., Benoit-Moreau, F. & Russell, C. A. (2015). Can evoking nature in advertising mislead consumers? The power of ‘executional greenwashing’. *International Journal of Advertising*, 34(1), 107–134. Available at <https://doi.org/10.1080/02650487.2014.996116>
- Peattie, K. & Crane, A. (2005). Green marketing: legend, myth, farce or prophesy? *Qualitative Market Research: An International Journal*, 8(4), 357–370. Available at <https://doi.org/10.1108/13522750510619733>
- Peattie, K., Peattie, S. & Ponting, C. (2009). Climate change: a social and commercial marketing communications challenge. *EuroMed Journal of Business*, 4(3), 270–286. Available at <https://doi.org/10.1108/14502190910992693>
- Polonsky, M. J. (1994). An introduction to green marketing. *Electronic Green Journal*, 1(2). Available at <https://doi.org/10.5070/G31210177>
- Polonsky, M. J. & Rosenberger, P. J. (2001). Reevaluating green marketing: a strategic approach. *Business Horizons*, 44(5), 21–30.
- Prack, R.-P. (2010). Kaufschalter „Knappheit“ und „Kontrasteffekt“ – Nichts ist, wie es scheint. *Beeinflussung im Verkaufsgespräch* (pp. 155–162). Wiesbaden: Gabler. Available at https://doi.org/10.1007/978-3-8349-6326-0_8
- Prakash, A. (2002). Green marketing, public policy and managerial strategies. *Business Strategy and the Environment*, 11(5), 285–297. Available at <https://doi.org/10.1002/bse.338>
- Raab, G., Unger, A. & Unger, F. (2010a). Die Theorie psychologischer Reaktanz. *Marktpsychologie* (pp. 65–76). Wiesbaden: Gabler. Available at https://doi.org/10.1007/978-3-8349-6314-7_5
- Raab, G., Unger, A. & Unger, F. (2010b). *Marktpsychologie: Grundlagen und Anwendung* (3. Aufl.). Wiesbaden: Gabler.
- Rasch, B. (Ed.). (2006). *Quantitative Methoden* (2. Aufl., Volume 1). Berlin, Germany: Springer.
- Riede, L. & Hofer M. (2022, August). Greenwashing - Umweltwerbung kann teuer werden. Available at <https://www.horizont.at/marketing/kommentar/gastkommentar-greenwashing---umweltwerbung-kann-teuer-werden-88955>

- Sachdeva, S., Jordan, J. & Mazar, N. (2015). Green consumerism: moral motivations to a sustainable future. *Current Opinion in Psychology*, 6, 60–65. Available at <https://doi.org/10.1016/j.copsy.2015.03.029>
- Schiffman, L. G., O’Cass, A., Paladino, A. & Carlson, J. (2014). *Consumer behaviour*. Sydney: Pearson Higher Education AU.
- Sharma, A. P. (2021). Consumers’ purchase behaviour and green marketing: A synthesis, review and agenda. *International Journal of Consumer Studies*, 45(6), 1217–1238. Available at <https://doi.org/10.1111/ijcs.12722>
- Siyal, S., Ahmed, M. J., Ahmad, R., Khan, B. S. & Xin, C. (2021). Factors Influencing Green Purchase Intention: Moderating Role of Green Brand Knowledge. *International Journal of Environmental Research and Public Health*, 18(20), 10762. Available at <https://doi.org/10.3390/ijerph182010762>
- Solomon, M., Russell-Bennett, R. & Previte, J. (2012). *Consumer Behaviour*. Melbourne: Pearson Higher Education AU.
- Szabo, S. & Webster, J. (2021). Perceived greenwashing: the effects of green marketing on environmental and product perceptions. *Journal of Business Ethics*, 171(4), 719–739. Available at <https://doi.org/10.1007/s10551-020-04461-0>
- Vu, D. M., Ha, N. T., Ngo, T. V. N., Pham, H. T. & Duong, C. D. (2021). Environmental corporate social responsibility initiatives and green purchase intention: an application of the extended theory of planned behavior. *Social Responsibility Journal*. Available at <https://doi.org/10.1108/SRJ-06-2021-0220>
- Wendlandt, M. & Hansen, U. (2005). Reaktanz als Stolperstein des Beziehungsmarketing. In A. Haas & B.S. Ivens (Eds.), *Innovatives Marketing* (pp. 133–153). Wiesbaden: Gabler Verlag. Available at https://doi.org/10.1007/978-3-322-89480-9_8
- Westermann, R. (1985). Empirical tests of scale type for individual ratings. *Applied Psychological Measurement*, 9(3), 265–274. Available at <https://doi.org/10.1177/014662168500900304>
- de Winter, J. F. C. & Dodou, D. (2010). Five-point likert items: t test versus Mann-Whitney-Wilcoxon (Addendum added October 2012). *Practical Assessment, Research, and Evaluation*, 15(1), 11. Available at <https://doi.org/10.7275/BJ1P-TS64>
- Wu, S.-I. & Chen, Y.-J. (2014). The impact of green marketing and perceived innovation on purchase intention for green products. *International Journal of Marketing Studies*, 6(5), 81. Available at <https://doi.org/10.5539/ijms.v6n5p81>
- Yang, Y. C. (2017). Consumer behavior towards green products. *Journal of Economics, Business and Management*, 5(4), 160–167. Available at <https://doi.org/10.18178/joebm.2017.5.4.505>
- Yusiana, R., Widodo, A. & Hidayat, A. M. (2020). Green Marketing: Perspective of 4P’s. First ASEAN Business, Environment, and Technology Symposium (ABEATS 2019) (pp.

105–109). Bogor, Indonesia: Atlantis Press. Available at <https://doi.org/10.2991/aebmr.k.200514.024>

Zackariasson, P. & Dymek, M. (2016). Video game marketing: a student textbook. London: Routledge. Available at <https://doi.org/10.4324/9781315748900>

Zhang, L., Li, D., Cao, C. & Huang, S. (2018). The influence of greenwashing perception on green purchasing intentions: The mediating role of green word-of-mouth and moderating role of green concern. *Journal of Cleaner Production*, 187, 740–750. Available at <https://doi.org/10.1016/j.jclepro.2018.03.201>

Zhu, B. (2012). The impact of green advertising on consumer purchase intention of green products. *World Business and Economics Research Conference*. Available at <https://doi.org/10.2139/ssrn.2182906>

Zhuang, W., Luo, X. & Riaz, M. U. (2021). On the factors influencing green purchase intention: A meta-analysis approach. *Frontiers in Psychology*, 12, 644020. Available at <https://doi.org/10.3389/fpsyg.2021.644020>

Zimmer, M. R., Stafford, T. F. & Stafford, M. R. (1994). Green issues: dimensions of environmental concern. *Journal of Business Research*, 30(1), 63–74. Available at [https://doi.org/10.1016/0148-2963\(94\)90069-8](https://doi.org/10.1016/0148-2963(94)90069-8)

9 Appendix

Mapping

| Research Questions | Hypotheses | Method of Evaluation | Variables | Survey Questions |
|--|--|----------------------|--|-------------------|
| What impact do environmental claims have on consumers' reactance and purchase intention? | H0: Environmental claims in advertisements have an impact on consumers' reactance and purchase intention. H1: Environmental claims in advertisements have no impact on consumers' reactance and purchase intention. | Hypothesis test | Consumer reactance (consumer feels lack of control over their choice / behavioral freedom is threatened) 5: high; 1: low Likelihood to Buy & Purchase intention 5: high; 1: low | Question 1-5 |
| | If environmental claims in advertisements lead to consumers' reactance, there's a negative effect on purchase intention. | Correlation analysis | Consumer reactance 5: high; 1: low Purchase intention 5: high; 1: low | Question 1-5 |
| How can environmental claims in advertisements lead to psychological reactance of consumers against green marketing? | H0: Environmental claims in advertisements lead to psychological reactance of consumers against green marketing. H1: Environmental claims in advertisements don't lead to psychological reactance of consumers against green marketing. | Hypothesis test | Consumer reactance 5: high; 1: low | Question 3 & 4 |
| | Environmental claims in advertisements lead to psychological reactance of consumers against green marketing, if they do not believe the message is credible. | Correlation analysis | Consumer reactance 5: high; 1: low Credibility of message 5: high; 1: low | Question 3, 4 & 6 |
| | H0: Environmental claims in advertisements as part of a green marketing strategy are trusted by consumers. H1: Environmental claims in advertisements as part of a green marketing strategy are not trusted by consumers. | Hypothesis test | Trustworthiness of environmental claims 5: high; 1: low | Question 7 |
| How can green marketers successfully make use of environmental claims in advertisements? | Green marketers can successfully make use of environmental claims when consumers are not suspecting elements of greenwashing in the advertisement. | Correlation analysis | Purchase intention 5: high; 1: low Suspicion of greenwashing 5: high; 1: low | Question 1, 5 & 8 |
| | Green marketers can successfully make use of environmental claims in advertisements, if they provide further resources about the product's impact to consumers. | Correlation analysis | Purchase intention 5: high; 1: low Resources provided 5: high; 1: low | Question 3, 4 & 9 |

Online Survey



Dear survey participant,

the following questionnaire serves as an experimental study in the course of my Master's degree Digital Communication & Marketing at the FHWien WKW in Vienna. The topic or the exact title will not be mentioned here in order not to bias the results.

Please note:

- This survey is completely **anonymous**. Your replies will be treated confidentially.
- Questionnaires that are not fully completed cannot be used for evaluation.
- It will take about **3-5 minutes** maximum to complete the survey.

If you have any further questions please don't hesitate to get in touch via astrid.koger@edu.fh-wien.ac.at.

Thank you for taking the time to answer the questions and thus helping me with my master's thesis!

Kind regards
Astrid Koger

7%

CONTINUE

[TIVIAN]

Introduction

You will be shown a graphic advertisement asset promoting bottled water on the next page. Please take a close look at it and read all content.

You will then be asked questions relating to the advertisement. Please take your time and answer the questions honestly and accurately.

BACK

14%

CONTINUE

[TIVIAN]



[TIVIAN]



Question 1:

Are you likely to buy the displayed product based solely on the advertisement?

Please mark accordingly.

Very unlikely

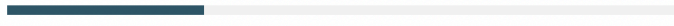
Unlikely

Neutral

Likely

Very likely

BACK



29%

CONTINUE

Question 2:

"My willingness to buy the product is impacted by the claim shown in the advertisement."

The "claim" is the verbal part of the ad that makes some claim of superiority for the product being advertised.

Please state to what extent you agree with the statement above.

Strongly disagree

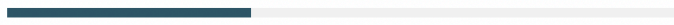
Disagree

Neutral

Agree

Strongly Agree

BACK



36%

CONTINUE

Question 3:

"I feel my freedom of choice is limited according to the content of the advertisement."

Please state to what extent you agree with this statement.

Strongly disagree

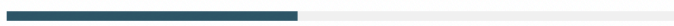
Disagree

Neutral

Agree

Strongly agree

BACK



43%


CONTINUE

Question 4:

"I feel an unpleasant arousal or pressured by the content of the advertisement."

Please state to what extent you agree with the statement above.

Strongly disagree Disagree Neutral Agree Strongly agree

BACK  50% CONTINUE

Question 5:

"I would rather buy a product that is advertised without an environmental claim than one being promoted as causing fewer carbon emissions and protecting the environment."

Please state to what extent you agree with the statement above.

Strongly disagree Disagree Neutral Agree Strongly agree

BACK  57% CONTINUE

Question 6:

"I trust that the message of the advertisement shown is credible."

Please state to what extent you agree with the statement above.

Strongly disagree Disagree Neutral Agree Strongly agree

BACK  64% CONTINUE

Question 7:

"I generally trust environmental claims in advertisements to be true."

Please state to what extent you agree with the statement above.

Strongly disagree Disagree Neutral Agree Strongly agree

BACK

71%

CONTINUE

Question 8:

"The advertisement contains elements of greenwashing."

Greenwashing is a critical term for marketing methods that aim to give a company an environmentally friendly and responsible public image without sufficient basis

for doing so.

Please state to what extent you agree with the statement above.

Strongly disagree Disagree Neutral Agree Strongly agree

BACK

79%

CONTINUE

Question 9:

"I feel that being referred to further resources in the advertisement about the product's impact would increase my willingness to buy."

Please state to what extent you agree with this statement.

Strongly disagree Disagree Neutral Agree Strongly agree

BACK

86%

CONTINUE

[TIVIAN]

Thank you for your participation!

You can close the window now.

Redeem Survey Code with one click: <https://www.surveycircle.com/HQSK-XLV4-X58G-4LBF>

100%