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# **Does ESG influence consumers' intent to purchase a smartphone**

The Finnish consumer's perspective

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**ABSTRACT:**

Currently the impact of ESG on consumer behaviour is a very understudied topic. Some studies have been done, however both a literature and a contextual gap exists. This thesis will provide more insight into this topic and provide data for future researchers. The objective is to find out what kind of a role sustainability plays in the consumer's purchasing decision.

The three hypotheses in this thesis are sustainability is not an important factor in the purchasing decision, crimes against sustainability by a company that get notable publicity, impact the consumers purchasing decision and the length of ESG reporting makes it harder for consumers to choose a more sustainable solution. Together the theory is that because of the length of ESG reports consumers do not take sustainability into consideration in their purchasing decision. Only if a crime against sustainability gets notable attention, and therefore the consumer becomes aware of the crime, only then will it impact the consumers purchasing decision.

The theoretical framework is based on two theories, which are consumer behaviour theory and signaling theory. This theoretical framework helps to explain both the company's actions and the consumer's actions. Key concepts include abbreviations, an agreement, and concepts. The abbreviations are ESG, CSRD, and ESRS. The Paris Agreement is an important agreement. The other concepts are consumer behaviour and greenhouse gases.

The data gathering methods used for this thesis are analysing secondary data in the form of the case companies' ESG reports and an anonymous survey. Mixed method is used. In both the survey and the secondary data both qualitative and quantitative data is gathered. The data is analysed, and important findings are demonstrated with images.

Sustainability was not an important factor for everyone. For those who thought that sustainability was an important factor, the length of the ESG reports made it harder to find a sustainable solution. If something got notable publicity, then it could impact the purchasing decision.

An ethics rating was suggested as well as more concise ESG reporting. Companies could benefit from making sustainability an accessible feature. Especially young people are interested in sustainability.

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**KEYWORDS:** ESG, Sustainability, Consumer behaviour, ESRS, Signaling theory

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**VAASAN YLIOPISTO****Johtamisen yksikkö**

<b>Tekijä:</b>	Venla Niininen		
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**TIIVISTELMÄ:**

Tällä hetkellä ESG:n vaikutus kuluttajakäyttäytymiseen on aihe, jota on tutkittu hyvin vähän. Joitakin tutkimuksia on tehty, mutta sekä kirjallisuus että tämä kyseinen konteksti puuttuvat nykyisistä tutkimuksista. Tämä tutkielma tuo lisätietoa vähän tutkittuun aiheeseen ja auttaa tulevaisuuden tutkijoita suorittamaan omia tutkimuksiaan. Tarkoituksena on saada selville missä roolissa kestävyys on asiakkaan ostopäätöksessä.

Tämän tutkielman hypoteesit ovat kestävyys ei ole tärkeä tekijä ostopäätöksessä, rikkeet kestävyyttä vastaan, jotka saavat merkittävää näkyvyyttä vaikuttavat kuluttajan ostopäätökseen ja ESG-raporttien pituus estää kuluttajia löytämästä kestävämmän vaihtoehdon. Nämä hypoteesit yhdistyvät siten, että ESG-raporttien pituudesta johtuen kuluttajat eivät ole kiinnostuneita löytämään kestävä vaihtoehtoa. Jos rike kestävyttä vastaan ylittää uutiskynnyksen ja siten tulee kuluttajan tietoisuuteen, niin sitten se vaikuttaa ostopäätökseen.

Teoreettinen viitekehys perustuu kahteen eri teoriaan, jotka ovat kuluttajakäyttäytymisen teoria ja signaaliteoria. Nämä teoriat auttavat selittämään niin yrityksen kuin kuluttajienkin toimintaa. Tässä tutkielmassa tärkeisiin konsepteihin kuuluu lyhenteitä, sopimus ja muita termejä. Lyhenteet ovat ESG, CSRD ja ESRS. Sopimus on merkityksellinen Pariisin sopimus. Muut termit ovat kasvihuonekaasut ja kuluttajakäyttäytyminen.

Datankeräysmenetelmät, joita tässä tutkielmassa on käytetty sekundaarisen datan analysointi ESG-raporttien analyysin muodossa ja anonyymi kysely. Monimenetelmällinen tutkimusmetodi on käytössä. Kummastakin datanlähteestä analysoidaan sekä kvantitatiivista että kvalitatiivista dataa. Data on analysoitu ja tärkeää dataa visualisoidaan lukijalle piirakkadiagrammien avulla.

Kestävyys ei ollut tärkeä tekijä kaikille kuluttajille. Ne ketkä pitivät kestävyttä tärkeänä tekijänä kokivat, että ESG raporttien pituus teki kestävämmän vaihtoehdon löytämisen hyvin vaikeaksi. Suuren julkisuuden saavuttanut rike kestävyttä vastaan saattoi vaikuttaa kuluttajan ostopäätökseen.

Eettisyys asteikkoa ehdotettiin ratkaisuksi sen lisäksi, että ESG-raporteista tehtäisiin ytimekkäämpiä ja siten helppolukuisempia. Yritykset voisivat hyötyä tästä tiedosta kehittämällä ESG-raporttejaan helppolukuisimmiksi. Erityisesti nuoret pitivät kestävyttä tärkeänä ominaisuutena.

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**AVAINSANAT:** ESG, Kestävyys, Kuluttajakäyttäytyminen, ESRS, Signaaliteoria

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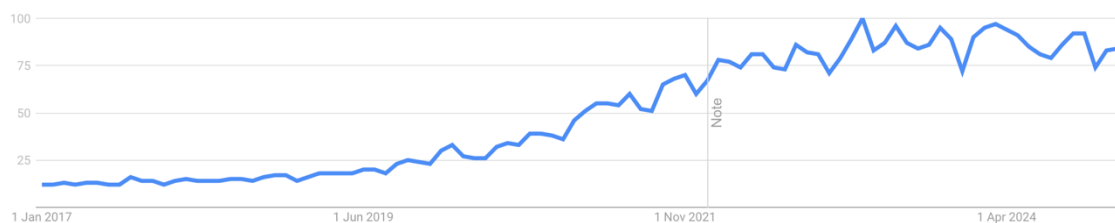
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# 1 Introduction

## 1.1 Background

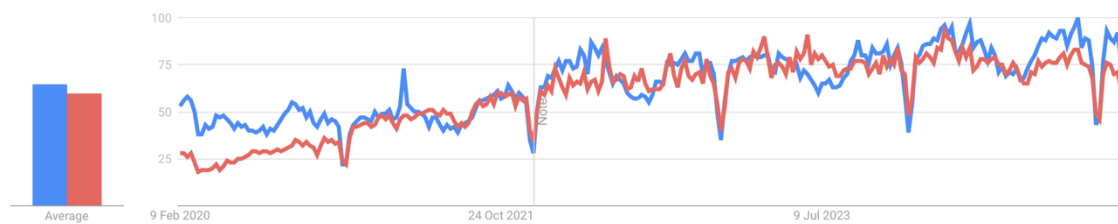
In recent years the ease of accessing information and data has made the public more aware of climate change and its severe impacts on both the people's health and the planet's ecosystem and climate, furthermore, making people more interested in sustainability (Kopnina, 2015, p. 8; Orazalin et al., 2024). The acronym ESG which stands for environmental, social, and governance is a tool that companies can use to measure their sustainability across these three different factors (What is ESG reporting, 2024). According to Kopnina (2015, p. 8) a company's choice to be more sustainable is indeed a way for the company to better their public image since to the consumer, who is interested in combatting climate change, it would seem like the company cares about their surroundings.



**Figure 1.** The trend of the search term "Environmental, social, and governance" in Google from January 2017 to January 2025 (Google Trends, 2025).

According to Merriam-Webster (Sustainable adjective, n.d.) the term sustainable describes how resources are used in such a manner that they are not damaged or depleted, however the term sustainability is more than just the environmental impacts of, in this thesis, a company's actions. In recent years several different concepts have been created that help to measure and analyze a company's overall performance in sustainability. One of these concepts is ESG, which has in the last five years seen a steady growth of approximately 300% (see Figure 1).

“Now is the peak of ESG” (Edmans, 2022). According to Edmans (2022) there has been a huge growth in companies make their business decisions based on ESG values. Thus, for example, ESG funds and shares of companies that follow ESG values have seen a rise in popularity in recent years. In the last few years new studies have shown that not only do companies following the ESG values compete well against companies that do not follow the ESG values, but they have recently performed better than companies that do not follow the ESG values (Kotsantonis et al., 2016, p. 10).



**Figure 2.** The comparison of search term “Sustainability” (shown as blue) and “ESG” (shown as red) in Google from February 2020 to February 2025 (Google Trends, 2025).

ESG is a tool that measures sustainability, consequently sustainability and ESG have seen similar trends in the search frequency (see Figure 2). Even though there are some spikes of disinterests in sustainability and consequently ESG, the trend has been consistent; interest in sustainability and therefore ESG has been steadily growing in the last five years. Due to this trend of growing interest in these topics companies want to better their image by becoming more sustainable (Kopnina, 2015, p. 8).

In addition to sustainability and therefore ESG being a way for the company to boost their public image, laws and agreements exist that dictate the operations of a company. The Paris Agreement is an agreement between the countries of the United Nations, which goal is to limit the impacts of climate change. The agreement mandates members of the United Nations to, on a national level, make efforts to minimize their own negative impact on climate change as illustrated in example (1).

- (1) “As nationally determined contributions to the global response to climate change, all Parties are to undertake and communicate ambitious efforts” (Paris Agreement (2015), Article 3)

In addition to The Paris Agreement effecting companies’ strategies globally (Paris Agreement, 2015), also on a country level there are differing laws that companies must abide by. The Paris Agreement mandates the members of United Nations to update their own laws so that the temperature goal is met (Paris Agreement (2015), Article 2&3). The Finnish law mandates that companies must operate in a way that impacts the environment the least as illustrated in example (1).

- (2) “Operators shall organize their operations in such a way that environmental pollution can be prevented in advance. Where pollution cannot be fully prevented, it shall be limited to the lowest possible level” (Environmental Protection Act (905/2020), Section 7).

Paris Agreement is an agreement between the members of the United Nations (Paris Agreement, 2015), which means that the agreement is between 193 countries that are the members of the United Nations as of February 2025 (About Us, United Nations, n.d.). The Paris Agreement mandates its members to put in place their own laws that will help to achieve the goals set out in the Agreement (Paris Agreement (2015), Article 4). Each member country has their own individual laws that companies must abide by in addition to the global laws that are in place.

Sustainability is trending topic (see Figure 2), and companies can use their sustainability initiatives as their way to market themselves amongst conscious consumers (Kopnina, 2015, p. 8). It is a smart move for companies to build their productions in such a manner that they are over the requirements of the law, since the law will most likely become stricter. When the laws become stricter the company does not have to do as many changes to their production to once again be in the situation, where their productions

are in accordance with the law. In addition to it being a good marketing strategy for a company to be more sustainable than the law mandates, it is also a smart business move that prepares the company for future restrictions.

### **1.1.1 Research question**

Does ESG influence consumers' intent to purchase a smartphone? The perspective of Finnish residents was chosen for the data gathering. The purpose is to find out whether consumers have familiarized themselves with ESG reporting. ESG reports tend to be rather lengthy and hard to read, which could be a factor in the consumers decision not to familiarize themselves with ESG reports before the purchasing decision of a smartphone. The goal is to find out whether a crime against sustainability that receives notable publicity, would be a cause for the consumer to rethink when considering their next smartphone. If an average consumer does not have the resources to read several ESG reports, then does largely publicized sustainability crimes impact the consumer's purchasing decision.

### **1.1.2 Why is this topic important**

ESG has grown in popularity in the last few years (Edmans, 2022), which is demonstrated by consumers seeking additional information about the topic (see Figure 2). Since ESG is a rather new term that has just recently seen concrete regulations (The Commission adopts the European Sustainability Reporting Standards, 2023), it has not been yet thoroughly studied. It has been realized globally that sustainability is needed now more than ever (Jiang et al., 2024).

The topic of how ESG reporting might influence consumer behaviour when purchasing smartphones is important for both consumers and the companies selling the smartphones. For the companies it is crucial to understand the customers perspective

on their ESG reports. The companies should find innovative ways to bring the information to consumers, since currently the ESG reports are rather inaccessible for a consumer wanting to find the most sustainable option. For consumers, the third chapter summarizes the most popular smartphone brands content of the ESG reports and could influence the consumers opinion of the brand.

This thesis provides a lot of insight that smartphone companies could use to better their position in the eyes of a sustainable consumer. The potential points of development are valuable for companies, especially as sustainability is a growing trend amongst consumers. Not only smartphone brands, but other brands that must provide ESG reports, could benefit from this thesis. Even though this thesis researches the field of technology, the results of how ESG reports impact consumer behaviour are valid in other fields also.

Not only is this research relevant to consumers and companies, which have to publish ESG reports, but this research is also valuable for researchers. For this thesis valuable data has been collected that shows an insight of how ESG reporting impacts consumer behaviour. The ESG reports effects on consumer behaviour, is a topic that has only recently been studied and has a lot of research gaps. This thesis will bring valuable new insight about the connection.

## **1.2 Key concepts and their definitions**

This chapter introduces the key concepts used in this thesis. These key concepts include concepts, abbreviations, and an agreement. The abbreviations are ESG, CSRD, and ESRS. A key concept in the form of an agreement is the Paris Agreement. Greenhouse gases and consumer behaviour are introduced.

**ESG**, which stands for environmental, social, and governance, is a way of measuring a company's sustainability. According to SAP (What is ESG reporting?, 2024) ESG reporting

is a way for companies to show stakeholders how sustainable they are. According to Pérez et al (2024) ESG has been trending lately. In addition to ESG being a way for a company to boost their brand image (Kopnina, 2015, p. 8), there are also laws that regulate the impacts that parties have on the environment (Paris Agreement (2015), Article 3; Environmental Protection Act (905/2020), Section 7).

**CSRD** stands for Corporate Sustainability Reporting Directive (Corporate sustainability reporting, n.d.). The directive states which companies must follow the new European Sustainability Reporting Standards based on the scale of business. 2024 is the year during which the first companies are subjected to the ESRS rules. Consequently 2025 will be the first year that reports following ESRS are released from companies that meet the criteria of CSRD.

**ESRS** stands for European Sustainability Reporting Standards, which are the standards for companies that meet the criteria of CSRD (The Commission adopts the European Sustainability Reporting Standards, 2023). As stated earlier, the first reports following ESRS are to be released in 2025 about the year 2024, and not by all companies at once. This means that the reports analyzed in this thesis were not subject to ESRS.

**The Paris Agreement** is a global legal agreement that was agreed upon between United Nations members (The Paris Agreement, n.d.). The goal of this agreement is to try to minimize the impact humanity has on the environment and slow global warming. Paris Agreement mandates that greenhouse gas emissions must decline by 43% by the year 2030, which is a goal year commonly seen in the ESG reports analyzed in this thesis.

Carbon dioxide, methane, nitrous oxide, and fluorinated gases are the called the **greenhouse gases** (Overview of Greenhouse Gases, 2025). These gases are natural, however several industries contribute to releasing more of these gases into the atmosphere. When these gases are released to the atmosphere they reflect warmth making the climate warmer (Brander & Davis, 2012, p. 1). The goal of the Paris

agreement is to make all the parties to lower their greenhouse gas emissions thus lowering the rate of global warming. Greenhouse gas is often used as a synonym for carbon dioxide, however it is only one of the greenhouse gases.

**Consumer behaviour** according to Szmigin and Piacentini (2015, p. 40-41) is a way to analyze consumers decisions based on several factors. They explain that in addition the products' specifics also the environment has an impact on the customer's decision. The internet has impacted consumer behaviour a lot (Miklošik, 2015, p. 167). Two steps in consumer behaviour that are important in this thesis are the step in which the consumer gathers information and compares alternatives (Marketing Theories: the Consumer Decision Making Process, n.d.).

### 1.3 Hypotheses

The three hypotheses are introduced in this chapter. The hypotheses have been decided based on the literature review, previous studies of consumer behaviour, and knowledge of the Finnish population. The hypotheses have been set before viewing the data. The findings chapter (see Chapter 5) will discuss whether the hypotheses were correct or incorrect.

The first hypothesis is that sustainability is not an important factor in the purchasing decision of a consumer. This is because other features are easier to research. The survey has a question in which the respondents had a chance to tell what factors impact their purchasing decision. The research question was about what role ESG reports have in a consumer's intent to purchase a smartphone and the first hypothesis is that the ESG reports are not an important factor for consumers.

**Hypothesis 1:** sustainability is not an important factor in purchasing decision.

The second hypothesis is that remarkable offences against sustainability agreements would impact the purchasing decision of a consumer. If a company would get notable publicity for a crime against sustainability, the brand image of the consumer could be altered further impacting the purchasing decision of the consumer. Public backlash could be a factor that would impact the purchasing decision. The aim of the research is to find out the connection between ESG and consumer behaviour and the aim of this hypothesis is to find out if consumers take sustainability into consideration if the company's sustainability actions are worse than the average competitors' actions.

**Hypothesis 2:** Crimes against sustainability by a company that get notable publicity, impact the consumers purchasing decision.

The third hypothesis is about the lengths of the ESG reports. The five companies that were analysed had the average length of the reports at 97 pages. The hypothesis is that the length of these reports is a factor in consumers not searching for more data about sustainability. If a consumer would want to compare two different phone brands they would have to read an average of approximately 200 pages. In addition to reading the 200 pages they would have to compare data between the two reports. This links to the research question, since reading ESG reports would be crucial to finding out about the companies sustainability, however according to the hypothesis consumers are likely not reading ESG reports due to their length.

**Hypothesis 3:** The length of ESG reporting makes it harder for consumers to choose a more sustainable solution

The first hypothesis is an assumption that an average consumer does not care about the sustainability of a smartphone company enough to make it a factor in their purchasing decision. This ties to the third hypothesis that the length of the ESG reports makes it harder for the consumer to choose a more sustainable option. The third hypothesis is tied to the second hypothesis. The second hypothesis is an assumption that because

majority of consumers do not analyse ESG reports, they are not aware of companies' crimes against sustainability. Therefore, notable publicity and public backlash for a company would bring the faults in sustainability to the consumer's attention.

#### **1.4 Delimitations of the study**

The data gathering method of this study is a survey. This means that the population that answers the survey is a sample size that might not reflect on the actual population correctly. Answering the survey requires knowledge of either Finnish or English, meaning that Finnish residents that do not have knowledge of these languages are not taken into consideration in this study. Access to a device that connects to internet is a requirement, however, since the data gathering is focused on people with smartphones this should not be a problem.

The study is focused solely on the perspective of Finnish consumers. Collecting data from every country of the world within the time limits of writing the thesis would be impossible. In addition, analysing the data from several different countries would be too broad for a thesis. Therefore, the study is limited to the perspective of Finnish consumers.

The study is focused on smartphone brands. The five most popular brands were selected instead of all brands. The selection was made so that the analysis of the ESG reports would be of good quality. The participants have an option to state that they have another brand that is not one of the five chosen brands, however the focus is on the five brands. The five brands that were chosen, represent the top 15 most sold models for both private consumers and businesses (see Chapter 2.1).

The criteria that will be used in the analysis of the ESG reporting has been limited to few key criteria (see Figure 3). The environmental aspects that will be looked for are greenhouse gas emissions, water management, renewable energy, protecting the environment, and hazardous substances. The social aspects are social initiatives, labour

practices and human rights, diversity, health and safety, and supply chain responsibility. The governance aspects are board composition and compensation, risk management, shareholder rights, and anti-corruption and anti-bribery. These chosen aspects give a good overview and are decided based on the content of the ESG reports.

## **1.5 Structure of the thesis**

The structure of the study is as follows. The first chapter is the introduction chapter. The introduction chapter covers the background for the study, key concepts and their definitions, explaining the research question, hypotheses, delimitations of the study, and the structure of the thesis.

The second chapter is the literature review chapter. The second chapter focuses on the literature review. ESG is introduced. The theories that form the theoretical framework are introduced. The research gap is introduced in this chapter.

The third chapter analyses the ESG reports of the five most sold smartphone brands in Finland. Apple, Samsung, OnePlus, Honor, and Oppo are analysed based on their ESG reports. The fourth chapter explains the data gathering methodology. The thought process behind the research method selection is explained. Data collection and analysis methods are explained. Then the validity and reliability of the data is discussed. The fifth chapter discusses the findings of the gathered data. The sixth chapter is the concluding chapter. References and the appendix are after the sixth chapter.

## 2 Literature review

In this chapter the Finnish smartphone market will be introduced. The reason why the smartphone market is chosen as the focus of this thesis is explained. The case companies and how they were chosen is discussed. The literature about ESG is reviewed. The theoretical framework of this thesis is introduced. Finally, the current state of research is introduced, further introducing the research gap.

### 2.1 Smartphone market

DNA is a popular Finnish telecommunications company with a steady yearly revenue of around a billion euros (DNA Oyj, n.d.). DNA has provided a top 15 list of their most sold smartphones for private consumers as well as for companies. DNA has shared their lists to other sources, and they have lists from different time periods. By comparing different lists, the case companies have been chosen for this thesis.

In DNA's announcement that was published by STTINFO (2025), the companies that had one or more models in the top 15 most sold smartphone list for the year 2024 were Apple, OnePlus, OPPO, and Samsung. In addition, December's top 15 list (DNA Oyj, 2025) and October's top 15 list (DNA:n lokakuun 2024 myydyimmät puhelimet ja älykellot, n.d.) both included Honor. The most smartphone models differ slightly depending on, which reseller provides their list, however the most frequent smartphone producers remain Apple, Samsung, OnePlus, Honor and Oppo (Mäkilä, 2024). These are the companies chosen for this thesis.

Apple's value has increased exponentially in the last few years currently being valued at around 3.5 trillion dollars (Apple Inc. (AAPL), n.d.). Samsung's net worth has steadily been over 200 billion dollars for the last few years (Samsung Electronics Co., Ltd. (SSNLF), n.d.). In 2024 OnePlus' net sales were worth 390 million dollars (oneplus.com:

eCommerce revenue analytics, n.d.). Smartphones are a common household product, which means that successful companies are worth a lot. Because smartphones are so common, the smartphone market is a good place to focus the research on.

## 2.2 ESG

ESG is an acronym that stands for environmental, social, and governance (Trahan & Jantz, 2023). Edmans (2022) states that the term ESG has seen enormous growth in its popularity in recent years. Even though ESG shares and funds have seen recently a lot of growth, it has not always been like that. Earlier in this millennium it was a widespread conception, that following sustainability, and ESG in particular, would make the company less profitable or even unprofitable, therefore making ESG companies unpopular amongst investors and stakeholders (Laine et al., 2022, p. 127).

In recent years attitudes towards sustainability have changed and consequently the popularity of ESG has risen (see Figure 1). In addition to sustainability can be a way for companies to sell to conscious consumers (Kopnina, 2015, p. 8), it is required by law (The Paris Agreement, n.d.). The continuous changing of the laws about ESG reporting (Fillmann & Kendrick, 2024a; Fillmann & Kendrick, 2024b) creates a situation in which companies benefit from being more sustainable than the law requires, since the next update in the law might force the changes to the company that they voluntarily have already done.

Kaplan and Ramanna (2021, p. 12) state that ESG performance reporting is based more on the company's actions and plans rather than actual results. They continue to state that important factors of ESG reporting are such that they can not be put into numbers. The article written by Kaplan and Ramanna was published in 2021, the framework and laws regarding ESG reporting have been updated a lot. The regulations change rapidly as demonstrated by the updates that the international law office Squire Patton Boggs provides (Fillmann & Kendrick, 2024a; Fillmann & Kendrick, 2024b). These overviews of

ESG law were updated first in May and then in November. The laws and regulations of ESG reporting are changing due to ESG reporting being rather new.

### **2.2.1 ESRS and CSRD**

ESRS stands for European Sustainability Reporting Standards, which are a recent update in the ESG reporting field (The Commission adopts the European Sustainability Reporting Standards, 2023). The European Sustainability Reporting Standards is a basis for sustainability reporting that needs to be used by the companies that are subject to CSRD. CSRD stands for Corporate Sustainability Reporting Directive.

The popularity for companies to be sustainable and further do sustainability reporting, is a rather new phenomenon (Edmans, 2022). European Sustainability Reporting Standards were passed in July 2023 (The Commission adopts the European Sustainability Reporting Standards, 2023), which means that this will impact companies reporting especially in the next few years.

### **2.2.2 Environmental**

Henisz et al. (2019, p. 1) describes the environmental aspect as every company needs resources and therefore interacts with nature. The "E" in ESG stands for environmental. The environmental aspect of ESG measures how environmentally sustainable a company is. For example, greenhouse gas emissions, water pollution, and toxic emissions can be measured to indicate a company's environmental sustainability (Giese et al., 2021; Trahan & Jantz, 2023). According to SAP (What is ESG reporting?, 2024) the "E" in ESG measures the company's impact as a whole to the surrounding environment. This means that in addition to traditional sustainability aspects, that were mentioned earlier, also aspects like how resources are gathered and how the gathering methods impact the nature are also taken into consideration.

According to Hertwich and Wood (2018) the greenhouse gas emissions of a company are measured in three different categories called scopes. Scope 1 measures the carbon dioxide emissions that come straight from the company's facilities and factories. Scope 2 measures emissions that come from electricity consumption. Scope 3 emissions are indirect emissions that are not from the company, but the company is responsible for them, for example, suppliers, business travel, and everything that goes into producing products that happens outside of the company's own facilities (Schmidt et al., 2022).

According to Frydinger (2024, p. 211) European Sustainability Reporting Standards have five categories for the environmental sustainability. Climate change, pollution, water, ecosystems, and resource usage. The European Sustainability Reporting Standards will gradually become the standard for ESG reporting (The Commission adopts the European Sustainability Reporting Standards, 2023). Because the ESRS is new, not all companies have yet incorporated all the requirements in their reporting. Therefore, reports analyzed in chapter 3 (see Chapter 3) have not yet been required to report according to the European Sustainability Reporting Standards.

The European Sustainability Reporting Standards E1 is the standard for climate change (Frydinger, 2024, p. 211). According to Frydinger (2024, p. 216) the ESRS E1 standard is about greenhouse gas reporting. When greenhouse gas emissions are reported on they have three separate categories called scopes (What are scope 1, 2 and 3 carbon emissions?, 2024). With the help of these three different scopes the companies can report their greenhouse gas emissions. The greenhouse gas emission reporting is one of the factors analyzed in the ESG reports of the 5 companies.

Scope 1 emissions are emissions that come straight from the company and its operations (Frydinger, 2024, p. 217; What are scope 1, 2 and 3 carbon emissions?, 2024). Scope 2 emissions are the emissions that come from purchasing and producing electricity for their operations and scope 3 emissions are emissions are all of the emissions that come

from the companies' suppliers that are necessary for the companies' operations. Even though the ESG reporting of the 5 companies is from the year 2023, they have still incorporated scopes. The companies must explain in their reporting how their actions reflect the Paris Agreement's goals (Frydinger, 2024, p. 219).

The ESRS E2 standard is about pollution (Frydinger, 2024, p. 222). Frydinger states that companies must report how they affect air, water, and soil. Analyzing the reporting done by the five companies, plastic waste will be looked at. Plastic waste that ends up in the nature breaks down there resulting in microplastics, which cause adverse health effects in all animals (Pilapitiya & Ratnayake, 2024). These criteria were chosen based on the combination of the ESRS E2 and E5 standard and the content of the reports that were not under the restrictions of the ESRS yet.

Additionally, there are other aspects in the E2 standard. Waste should be reduced, pesticide usage should be controlled better, air pollution reduced, and noise pollution should be reduced (Frydinger, 2024, p. 223). Pesticides are regulated, however their residue can end up in our digestive systems and cause harm, in addition to causing harm for the workers that have to handle the pesticides (Damalas & Eleftherohorinos, 2011). Air and noise pollution causes cardiovascular problems (Brunekreef & Holgate, 2002; Münzel et al., 2021).

The ESRS E3 is about water and marine resources (Frydinger, 2024, p. 224). Water management is one of the criteria chosen for the analysis of the ESG reporting conducted later in this thesis (see Chapter 3). The water usage should be kept at minimum, the water should be reused, and bodies of water that have been used should be restored (Frydinger, 2024, p. 226). If water resources are used negligently the consequences can be severe. For example, the Aral sea's water volume decreased by 92% due to agricultural endeavors (Micklin, 2010). Water usage in water risk areas can lead to decreased food production and it can impact the ecosystems, additionally the lack of water and food resources causes health effects (Morante-Carballo, 2022).

ESRS E4 is about the biodiversity and ecosystems and how companies' operations affect them (Frydlinger, 2024, p. 266-267). Additionally, the companies' plans to keep the impact at lowest possible rate is required to be reported and how the companies' finances are linked. Trees and plants take carbon dioxide, which is one of the greenhouse gases, from the atmosphere and turns it into oxygen when photosynthesizing (Gust, 1996). The loss of biodiversity therefore means that there are less plants to take carbon dioxide from the atmosphere. Protecting the environment can therefore causally reduce air pollution and slow climate change (Shin et al., 2022).

Resource usage and circular economy are the ESRS E5 (Frydlinger, 2025, p. 230). Resource usage causes more greenhouse gas emission when new resources are mined instead of reusing old resources and they cause loss of biodiversity, which speeds up climate change (Frydlinger, 2024, p. 230-231; Shin et al., 2022). Hazardous substances and plastics are chosen for the analysis of the ESG reporting. Companies must report how they use and reuse resources. Hazardous substances, especially when exposed long-term, can cause severe health effects discussed later (see Chapter 3.3.3).

### **2.2.3 Social**

Henisz et al. (2019, p. 1) describes the importance of the social aspect in ESG, as every company being a part of the society and operating in connection with the society. The "S" in ESG stands for social. The social aspect measures how the company impacts everyone that comes into contact with the company. The social aspect measures whether employees throughout the supply chain work in humane conditions and how the company's production might impact the communities around the facilities (What is ESG reporting?, 2024).

Frydlinger (2024, p. 235) states that there are four standards for sustainability. Social sustainability is about the people affected by the operations, hence everyone affected

by the company should be reported on. This means the companies workers, supply chain workers, communities impacted by the company's operations, and consumers.

The ESRS S1 standard is about the workers that are directly employed by the company (Frydinger, 2024, p. 238). The reporting should include working conditions, equality at the workplace, and rights of the workers. Labor practices and human rights are analyzed based on S1 and S2 in chapter 3. In addition, diversity, health and safety of the workers is analyzed based on S1 and S2 in the third chapter.

The European Sustainability Reporting Standard S2 is about the employees that work for the company's end goal but are not directly employed by the company (Frydinger, 2024, p. 242). Iliev and Roth (2020, p. 14) state that diversity and human rights are some of the categories that fall under the social aspect. All the employees are important, not only those who work directly under the company. In this thesis, the companies have factories abroad, which have differing conditions. People tend to be skeptical about working conditions in factories abroad, thus the importance of ESRS S2.

The ESRS S3 is about the communities that are impacted by a company's operations (Wiedemann & Bröhl, n.d., p. 2). Additionally, Iliev and Roth (2020, p. 14) mention the community as being one of the aspects in the social sustainability. The S3 covers how the company's operations impact the surrounding communities, are there any negative and possibly reoccurring impacts, and social initiatives, which would be classified as positive impacts on communities (Frydinger, 2024, p. 245-246).

The ESRS S4 is about the end users and consumers (Wiedemann & Bröhl, n.d., p. 2). The S4 covers how a company affects end users and consumers (Akkermans, 2025; Frydinger, 2024, p. 247). For example, does the product or service have some health or safety impacts for the consumer, accessibility, and sustainable marketing practices (Akkermans, 2025; Frydinger, 2024, p. 247). Thus, if a smartphone company were to use dangerous materials in their devices, they would have to report about it.

Iliev and Roth (2020, p. 27-28) claim that efforts to improve a company's social aspects are not dependent on the field that the company is located in. However, the way companies try to achieve sustainability in the social sector is dependent on where the company is located and what they interpret as being important (Eccles et al., 2020).

#### **2.2.4 Governance**

All companies should operate within the limits of the law and their operations are controlled by governing (Henisz, 2019, p. 1). The "G" in ESG stands for governance. It measures how transparent a company is about everything that has to do with the company's governance. According to the European Financial Reporting Advisory Group there is only one G standard it being G1, whereas other E and S had multiple standards (ESRS G1 Governance, risk management and internal control, 2022, p. 3). The ESRS G1 has different disclosure requirements that are marked as, for example, G1-2 (Kouklíková et al., 2024).

The ESRS G1-1 covers the governance structure and the board composition (ESRS G1 Governance, risk management and internal control, 2022, p. 5). According to EFRAG's draft for the governance aspect of ESRS (ESRS G1 Governance, risk management and internal control, 2022, p. 5) the reporting should include what groups form the governance and what are their roles, who has which position, and how stakeholders are represented. It is important for companies to take into consideration other stakeholders than just shareholders, for the company to be successful according to the stakeholder theory (Mahajan et al., 2023).

The ESRS G1-2 requires the company to report what rules, laws, and regulations they follow (ESRS G1 Governance, risk management and internal control, 2022, p. 6). Further, according to EFRAG's draft the company must state what laws or regulations are followed and if they have implemented rules that go beyond what laws and regulations mandate,

they need to be reported on. Additionally, the rules, based on which the company operates, should be publicly available somewhere and the reader should be directed to where they are available.

The G1-3 is about how the board is chosen and G1-5 is how is the board held responsible for completing their assignments (ESRS G1 Governance, risk management and internal control, 2022, p. 6-8). For a company's governance structure to be sustainable, the board must be fairly chosen, and its activities be transparent. The G1-3 requires companies to report if stakeholders have an impact on the board members, is diversity a part of the nomination procedure, is the best fit for the role chosen, and can the possible future board member make unbiased decisions (ESRS G1 Governance, risk management and internal control, 2022, p. 6-8). Further, the G1-5 follows that the board members keep being unbiased and qualified, therefore fulfilling their assignments. The reporting must tell the structure of how the board's activities are followed and what is done if some aspects are lacking in the board's work.

G1-8 is about internal control about the sustainability reporting and how the information is checked (ESRS G1 Governance, risk management and internal control, 2022, p. 9). G1-7 is the reporting about the company's risk management system and the reporting should include details about how the risks are noticed, prioritized, dealt with, and followed afterwards (ESRS G1 Governance, risk management and internal control, 2022, p. 8-9). Risk management is used in a variety of fields (Aven, 2016) and it lowers the chance of crisis happening and if they happen the company can be prepared.

Diversity is a part of sustainability and therefore diversity falls under the reporting. G1-4 is the diversity policy whereas G1-9 is the actual diversity composition of the board (ESRS G1 Governance, risk management and internal control, 2022, p. 7; 9-10). EFRAG states that the diversity categories should include gender and age in both G1-4 and G1-9 and additionally minorities in G1-4. These diversity statistics give an insight on what kind of people oversee the company and thus in which direction the company leans.

## **2.3 Theoretical framework**

In this chapter relevant theories will be introduced. The theoretical framework helps to explain how ESG reporting impacts the consumer behaviour. Signaling theory, consumer behaviour theory, and consumer decision making process theory build the theoretical framework that helps to link ESG reporting as a factor in purchasing decision. The data collection is built based on this framework and the data will be analyzed based on the framework.

### **2.3.1 Signaling theory**

In signaling theory there are two parties in which one is the signaling party and the other is the receiving party (Connelly et al., 2011, p. 39). The purpose of the signals is to give the recipient more knowledge of the sender reducing the asymmetry of knowledge (Taj, 2016). The theory was first introduced by Spence who later has been quoted often (Karasek & Bryant, 2012, p. 91). Spence (1973, p. 358) states that when hiring the person who is seeking the job has several signals which offer more information about the interviewee to the interviewer reducing the information asymmetry.

The signaling theory is important part of the theoretical framework of this thesis. The signaling theory explains how companies partake in ESG initiatives as a way to signal the company's sustainability. In this case the signaler is the company, the receiver of the signal is the consumers. Spence (1973, p. 358) introduces the term signaling cost that refers to the price of the signal, in this case the price of the signal (ESG report) would be the price for the company to become more sustainable (the cost of changing their production in accordance with laws and regulations about sustainability).

When a company sends out a signal, the receivers can interpret it in different ways (Connelly et al., 2025). The contents of the ESG report can be interpreted in different ways by different shareholders. According to Taj (2016) if the company sends out false signals, it can lower their signal credibility. The data in ESG reporting can be presented in a manner that is misleading, which could potentially lower the company's signaling credibility.

### **2.3.2 Consumer behaviour theory**

Consumer behaviour theory is an umbrella term that includes several different theories. The goal of the consumer behaviour theories is to explain the behaviour behind consumers purchasing behaviour (7 Consumer Behaviour Theories You Need to Know, n.d.). Szmigin and Piacentini (2015, p. 40-41) state that the consumer behaviour theory seeks to explain based on different factors how consumers reached their decision.

Companies must have new products available when consumers have the need to purchase new products hence why companies produce constantly new products, however this fast-paced production causes concerns for the environment (Schiffman et al., 2013, p. 6). The concern for the environment in connection with production and disposing of old products ties into the environment aspect of ESG.

Szmigin and Piacentini (2018, p. 24) consumers can be categorized in several different categories, of which, the most relevant are activist, communicator, chooser, and rebel. Activist and rebel have the same goal of sustainability, however their methods differ; activist seeks the sustainable option whereas rebel actively shows their distaste in companies they deem bad (Szmigin & Piacentini, 2018, p. 24). They explain that the communicator choose products with which they can show a message, for example, their wealth, connecting to the signaling theory, since they are sending signals with products. Chooser takes into consideration, for example, the monetary aspect (Szmigin & Piacentini, 2018, p. 24). In this thesis the consumers faced with the ESG reporting fall into these categories.

Personal, social, cultural, and emotional/psychological factors seek to explain why consumers behave in a certain way (Roy, 2022, p. 212-213). According to both Roy (2022, p. 213) and Jisana (2014, p. 36) one of the deciding factors can be the beliefs of the consumer that can become their needs, which in this context means that a consumer who is interested in sustainability would likely make sustainability a need in their purchasing decision.

## **2.4 Research gap**

ESG has become more popular within the last few years as illustrated in Figure 2 (see Figure 2). The term ESG is relatively new, it was introduced in 2005 (Pérez et al., 2022, p. 1) and for a long time the term was vague. Only recently was the European Sustainability Reporting Standard introduced (The Commission adopts the European Sustainability Reporting Standards, 2023) which is starting to be implemented into companies' ESG reports now. This means that ESG is a rather new term which is constantly being defined more, thus leaving room for a variety of researchable topics.

There has been some previous research about ESG in connection with consumer behaviour. Nugroho et al (2024) have researched how ESG impacts consumer behaviour broadly and not in any particular field of business. They collected their data from Taiwan and Indonesia. Looking at more specific fields of business that have been studied in connection with ESG, Rastogi et al (2025) studied ESG in fashion industry. Rastogi et al (2025) had a target audience of only young people, however compared to Nugroho et al (2024) they did not have a specific geographical area where the data was gathered from.

Park et al (2024) studied ESG in connection with purchasing goods or services online. As ESG is about sustainability some have researched how it ties into conscious consumption (Palla Maier et al., 2024, p. 8). Consumption tied to ESG has been studied additionally by seeing how consumers save electricity in Korea (Cho & Lee, 2024). Mifsud (2024, p. 7;

31-33) studied how ESG impacts consumer behaviour in Malta and how it can be a positive or a negative trait influencing the behaviour of the consumer.

ESG has been studied in connection with purchasing certain goods or services and in different regions before. All of the studies concerning ESG as a factor in consumer behaviour are rather new. There have not been any previous studies about how ESG reporting might impact the consumers intent to purchase a smartphone. Previous research about ESG and consumer behaviour has been either global or regional. The Finnish perspective has been very understudied. Smartphone market being chosen as the field when studying consumer behaviour in connection with ESG reporting has not been done before especially in Finland.

This topic has two different types of research gaps (Al-Saraf, 2025). The first type of research gap is the literature gap, which means that the literature about this topic is rather scarce and additional research is needed (Al-Saraf, 2025). Additionally, there is a contextual gap, which means that even though some research exists about this topic it does not exist in the context this thesis is providing (Al-Saraf, 2025). Since, two different types of research gaps exist this thesis brings valuable insight about the topic that future researchers can build on.

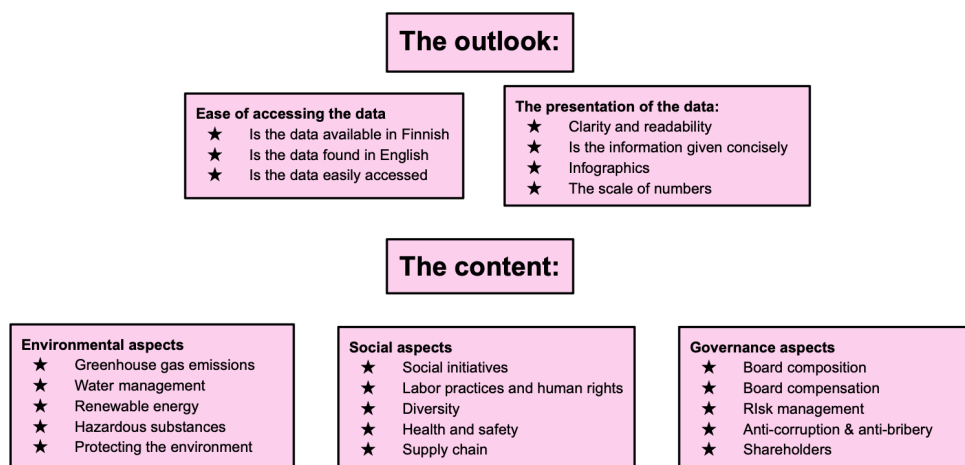
The way this thesis is different from previous research is as follows. This thesis brings a regional perspective of a region that has not been previously studied in this context. Additionally, this research focuses on a certain product type that has not been previously researched. This study focuses on ESG reports and their content as a factor in the consumer's intent to purchase a smartphone, which has not been the aim of previous studies. The previous studies have not focused on ESG reports and their contents as much as this thesis does. This thesis provides revolutionary data about the connection of ESG reports impact on consumer behaviour in a specific field with a specific regional focus. The data and findings of this thesis, if recognized by a company, could give competitive advantage to the company.

### 3 ESG reporting of the top 5 smartphone brands in Finland

In this chapter we will interpret the ESG reports of the most popular smartphone manufacturers in Finland. As mentioned earlier, the decision on which smartphone brands to include in this top 5 list is based on the most sold smartphone models of the top smartphone retailers in Finland (see Chapter 2.1). The five most frequently seen smartphone brands were Apple, Samsung, OnePlus, Honor, and Oppo (DNA Oyj, 2025; DNA:n lokakuun 2024 myydyimmät puhelimet ja älykellot, n.d.; Mäkilä, 2024).

In the analysis five categories are looked for, which are 1. Ease of accessing the data 2. The presentation of the data 3. Environmental aspects 4. Social aspects 5. Governance aspects (see Figure 3). The consumer segment that is under inspection in this thesis is Finnish people, so therefore this will be taken into consideration in the analysis. One third of Finnish people do not speak English (Ploscaru, 2024) so finding the information in their native language is important and therefore analysed.

ISO standards were referenced frequently in these reports. The standards referenced were behind a paywall (see Image 3) making it harder to know exactly the policies the companies are following. This will be taken into consideration in the analysis.



**Figure 3.** Aspects that are looked for in the ESG reporting.

### **3.1 Apple**

As of February 2025, the most recent environmental report provided by Apple is the report for Apple's fiscal year 2023 (Environmental Progress Report, 2024). Apple's report will be analyzed and judged based on the criteria provided earlier (see Chapter 3). The report is 113 pages long.

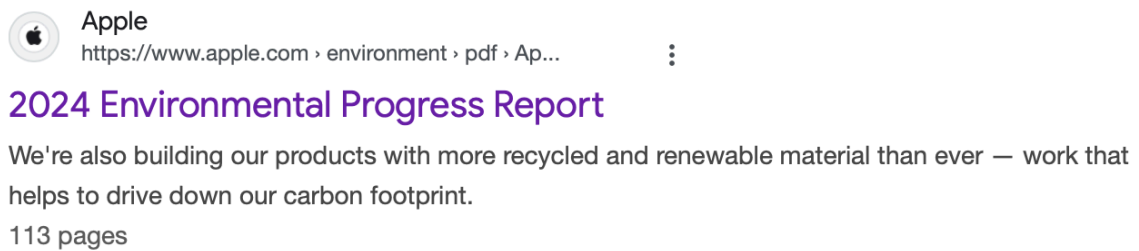
#### **3.1.1 Ease of accessing the data**

The data was easy to find and access. When typed into google "Apple ESG report" it was the first search result, which opened into a presentation of 2023 years results. The presentation is however in English. Since the focus is on Finnish consumers the need to access data in Finnish language is relevant. Using the search term "Apple kestävyysraportti" you can access a page that would seem to have similar content to the English report, however upon deeper inspection the information provided in Finnish language is quite concise (Ympäristö, n.d.).

As the goal for this thesis is to find out how ESG reporting impacts the Finnish consumers' purchasing decision, it would be important to have access to data in their native language since approximately  $\frac{1}{3}$  of the population does not speak English (Ploscaru, 2024), in addition to that those that do might not have achieved the fluency needed to understand the English version of the report. The presented data in Finnish language is quite concise compared to the English report (Ympäristö, 2024). All the additional information links that are provided in the Finnish version, are in English. The Finnish language presentation about Apple's environmental strategy picks out the main points of the full English report, however it does not go into depth in anything and does not mention any statistics or anything else that could be viewed in a critical manner.

### 3.1.2 The presentation of the data

The links leading to the English report is titled as “Vuoden 2024 raportti”, which translates to “The year 2024’s report”, in the Finnish page (Ympäristö, 2024). The links leading to the English report are also titled as if the report is about the year 2024, the title being “2024 Environmental Progress Report”(see Image 1). However, when you open the report, it states on the first page with a small print “Covering fiscal year 2023” (Environmental Progress Report, 2024), which according to Miglani (2023) took place from September 31<sup>st</sup>, 2022, to September 30<sup>th</sup>, 2023. The title is misleading, since it misleads the reader to believe that the report is about the year 2024 and not the end of 2022 and the majority of 2023. According to the signaling theory (see Chapter 2.3.1) this misleading titling can lower a company’s signaling credibility.



**Image 1.** The titling of Apple’s Environmental Progress Report (Google, 2025)

Excluding the misleading information about the year of the data used in the report, the information is portrayed in a clear manner (Environmental Progress Report, 2024). The report has a page of contents that has links to the different parts. The report has a lot of charts, pictures, and other visual ways of presenting the data, which makes understanding the data easier.

One of the criteria of presenting the data in a clear manner is the fact that numbers are presented in the same scale. This report presents some numbers in metric tons (Environmental Progress Report, 2024, p. 88) and some other numbers in million metric tons (Environmental Progress Report, 2024, p. 100) which makes it harder for the reader to make comparisons between the numbers.

### 3.1.3 Environmental aspects

According to Lisa Jackson, the vice president of Apple, Apple has reduced their emissions by approximately 55% after the year 2015 (Environmental Progress Report, 2024, p. 3). The year 2015 is the year that Paris Agreement was created. The comparison year of 2015 is most likely chosen due to Paris Agreement being a concrete agreement on binding global actions against climate change.

Apple states that their mission is to be carbon neutral by the year of 2030 (Environmental Progress Report, 2024, p. 3). The year 2030 also happens to be the year by which emissions should be declined by 43% according to United Nations Framework Convention on Climate Change (The Paris Agreement., n.d.).

Apple reports that their plastic footprint is 6 400 metric tons (Environmental Progress Report, 2024, p. 105) which is 6,4 million kilograms of plastic. This, however, does not include all of Apple's products, since some data is unavailable. The true number is therefore unknown. The report is done by Fraunhofer which is a prominent research organization, with one of their focus fields being climate technologies (Fraunhofer-Gesellschaft, n.d.).

The CO<sub>2</sub> (carbon dioxide) emissions that Apple reported and Fraunhofer checked, were 34 140 000 000 kilograms or 34,14 million metric tons (Environmental Progress Report, 2024, p. 100). The 34,14 million metric tons of carbon dioxide emissions were found on the report in the appendix at the end of the report, however earlier in the report Apple states that their carbon footprint is 15,6 million metric tons (Environmental Progress Report, 2024, p. 14, 77), and with a small font it is explained that this is all the carbon dioxide emissions however carbon offsets are subtracted from the actual number. The number is rather misleading, since it accounts for slightly less than half of the actual

emissions. Showing the lower number is a way for Apple to try to signal being more environmentally friendly than they are, further lowering their signaling credibility.

According to the report the products are designed so that reusing them is possible, meaning that the products are as durable as possible (Environmental Progress Report, 2024, p. 43-44). Apple has repair services for their products which helps with the longevity of the products life cycle. However, looking through the lens of a Finnish consumer, the repair shops are rather sparse in Finland, hence pushing the customer to buy a new product instead of searching for an authorized repair shop. The repairing of the products is a great way of protecting the environment since instead of buying a new product, the old one is used for a longer time.

Water usage is based on the water risk atlas (Environmental Progress Report, 2024, p. 48-51). Apple states that their goal is to by the year 2030 replenish all the water they use in water stress areas. In 2023 they reused 42% of the water and replenished 31,2 million gallons of water, however Apple does not provide other years' data to compare the current situation with. Apple reports that they are using other sources of water in addition to freshwater sources, however the other sources account to only 12%. Even though Apple does not provide comparisons for the current data, the initiatives they are currently undertaking are good.

Apple's goal is to use 100% renewable energy in 2030 (Environmental Progress Report, 2024, p. 27). The use of renewable energy has increased significantly over the last few years (Environmental Progress Report, 2024, p. 28). According to Apple their renewable energy initiatives blocked 18.5 million metric tons of greenhouse gas emission in 2023. Only 16,5% of used energy is renewable energy in the supply chain, this number has steadily increased, however it is nowhere near the 100% they are reaching for by the year 2030 (Environmental Progress Report, 2024, p. 81).

Greenhouse gas emissions, water metrics, and renewable energy was reported on. The statistics of these factors were reported and the plans and actions around them. However more comparing to previous years could have been included. Some of the data was more about future promises rather than the current situation and previous years.

#### **3.1.4 Social aspects**

According to Apple's ESG report, Apple has several different social initiatives (Environmental Progress Report, 2024, p. 31). Apple has been supporting some locations in Asia, Africa, and Southern America. According to Apple they support 20 different communities, by providing them with renewable energy, which is in accordance with the Paris Agreement's goal of lowering greenhouse gas emissions (The Paris Agreement, n.d.).

One of the current communities Apple is supporting, is Nitzana Educational Eco-Village (Environmental Progress Report, 2024, p. 31). Nitzana Educational Eco-Village is not a community that would be widely recognized, therefore additional information is needed, and the only thing Apple provides in the report is that the location of this community is in Israel in addition to the support they have provided, which in this case is solar panel systems (Environmental Progress Report, 2024, p. 31).

According to The Jewish Agency for Israel this seems to be an institute that in their own words teaches foreigners to be "excellent ambassadors for Israel and Judaism" when they return to their home country after the program or relocate to Israel (Nitzana: Harnessing the sun and the great human spirit, n.d.). It does not matter where the readers opinion lies about the conflict going on between Israel and Palestine, however it is questionable for a big company, like Apple, to support this kind of initiative.

Other initiatives include a school in Colombia (Environmental Progress Report, 2024, p. 31). The Colombian school's mission is helping disadvantaged youth in honor of the late

John Bosco (Ciudad Don Bosco, n.d.). John Bosco was a priest whose mission was to provide refugee boys with education in South America in the mid nineteenth century (St. John Bosco, 2025). This makes the institution religious, meaning that Apple supports religious institutes.

The social missions that Apple has reported in the report are mostly hospitals and some remote communities (Environmental Progress Report, 2024, p. 31). However, the level of clarity throughout the social initiative reporting varies. For example, the Israeli school is mentioned by the name (see Example 4) and the support Apple is providing is mentioned in detail, meanwhile in Thailand their initiatives are rather vaguely (see Example 3). This level of discrepancy is visible throughout the social initiatives reporting.

(3) “Apple has helped to establish a solar energy system [– –] for a remote fishing village [– –].” (Environmental Progress Report, 2024, p. 31)

(4) “Apple supports the Nitzana Educational Eco-Village [– –] with a 260 kilowatt solar system [– –] (and) another 64 kilowatt solar system installed in February 2023” (Environmental Progress Report, 2024, p. 31)

The reporting also includes a lot of promises for actions with no guarantees that these promises will be executed (Environmental Progress Report, 2024, p. 31), which is common in ESG reporting (Kaplan & Ramanna, 2021, p. 12). If Apple were to keep their promises, they do have a lot of great social initiatives, however it would be better if they reported all the initiatives with the same level of detail in order for the reader to do their own additional research if they want to do so. The reader can not find additional information about what the target of the initiatives if they are described at the level seen in Example 3.

Apple does not mention diversity of their workers. Apple has reported that now 100% of the suppliers of conflict minerals and cobalt have been verified to have complied with Apples standards, for example, human rights are now followed according to this report.

In 2016 Apple was accused of unethical mining by Amnesty International (Exposed: Child labour behind smart phone and electric car batteries, 2016). Apple now states that all parts of their operation operate with protection of the environment, health, and safety of every stakeholder in mind (Environmental Progress Report, 2024, p. 108).

Apple has reported on social initiatives, however some of them are questionable and some of them are reported very vaguely. Apple is committed to following human rights, health, and safety of their workers. Diversity was not discussed.

### **3.1.5 Governance aspects**

Apple has not reported their board composition or compensation (Environmental Progress Report, 2024). Discussing the risk management aspect of the company, the report states that Apple has used third party auditing to assure that the materials they use are in accordance with their own policies (Environmental Progress Report, 2024, p. 20). The water usage in water risk areas is adjusted with the current situation (Environmental Progress Report, 2024, p. 48). There is no separate section for risk management rather it has been briefly mentioned in different sections.

Anti-corruption and anti-bribery are not reported on (Environmental Progress Report, 2024). Shareholders' interests and how they are taken into consideration in the operations are not taken reported on. Stakeholders are mentioned briefly. Apple reports that they engage with different stakeholders to ensure that their environmental impact is minimal (Environmental Progress Report, 2024, p. 67-71) and that the environmental, health, and safety policies are known (Environmental Progress Report, 2024, p. 108).

## **3.2 Samsung**

As of February 2025, the most recent report that is able to be accessed is the report for the year 2023. Samsung's reporting has the same issue as Apple's reporting (Environmental Progress Report, 2024) that their report is titled with the wrong year. Samsung's 2023 report is actually the report of the year 2022 (Samsung Electronics Sustainability Report 2023, 2023, p. 118) and the report titled 2024 is actually the report for the year 2023 (Samsung Electronics Sustainability Report 2024, 2024, p. 70). The report is 83 pages long. The report will be analyzed and judged by the criteria that was introduced earlier (see Chapter 3). Using the wrong year in the title can lower the company's signaling credibility.

### **3.2.1 Ease of accessing the data**

When searching in Finnish for the report, there are pages that provide some very short overview of Samsung's sustainability efforts. There are no pages, as of February 2025, with links directly to even the English version of the report. Samsung had several phone models present in the top lists for both private consumers and businesses (DNA:n lokakuun 2024 myydyimmät puhelimet ja älykellot, n.d.). For example, OnePlus had three models in the private consumer list and only one model in the business list, yet they still had a page in Finnish language even though the quality of the page was rather poor. There is a very short summary available, however it does not have the report itself linked.

Accessing the report in English is much easier. There is a link in the search results that opens the PDF of the report, or you can go through their web page, where you can find the reports of several years. Accessing the data in English is easy.

### **3.2.2 The presentation of the data**

The report for the year 2023 is named as report for the year 2024 and the report for 2022 is named as the report for 2023, which is very confusing for the reader and might lead to reading an outdated report while believing that they are reading the newest report. Samsung and Apple both have this same problem of not knowing how to name their reports. This can lower their signaling credibility, since they are sending false signals.

Numbers are in the same scale making it easier for the reader to compare, for example greenhouse gas emissions (Samsung Electronics Sustainability Report 2024, 2024, p. 62-66). Infographics are rather sparse in this report. In addition to the lack of visualization, the text itself is not easily readable. The text is in parts unnecessarily long thus making it harder to understand their main point.

### **3.2.3 Environmental aspects**

Becoming a more sustainable company means, for example, having to transition to renewable energy (The Paris Agreement, n.d.). Samsung reports that their goal is to fully rely on renewable energy by the year 2027 (Samsung Electronics Sustainability Report 2024, 2024, p. 13) which is a good goal if it is achieved. Additionally, Samsung reports that their goal is to be carbon neutral by the year 2030, which is a goal their share with Apple (Environmental Progress Report, 2024, p. 12) and it links back to the Paris Agreement's goal of reducing emissions by 43% by the year 2030 (The Paris Agreement, n.d.).

Samsung provides few very good tables that present the greenhouse gas emission data from the previous three years (Samsung Electronics Sustainability Report 2024, 2024, p. 62). The table provides a title for each segment of emissions, however some of the titles are not such that it could be understood what kind of activities have produced the emissions. Majority of the different segments have had a steady decrease in the past

three years, however some categories have increased. For example, indirect emissions from scope 2 have risen, which means emissions from electricity generating have risen (What are scope 1, 2 and 3 carbon emissions?, 2024).

According to Samsung's report they are installing facilities with the goal of reducing nitrogen oxides (Samsung Electronics Sustainability Report 2024, 2024, p. 29), however despite this their dinitrogen oxide emissions have been on a steady rise (Samsung Electronics Sustainability Report 2024, 2024, p. 62). Nitrous oxide is one of the greenhouse gasses (Nitrous Oxide, 2023). Even though Samsung reports to have made efforts in reducing their emissions, some of their emissions have been on a steady rise. Carbon dioxide emissions have decreased from the year 2021, however they have increased from the year 2022.

The Samsung report states that their goal is to restore all the water they use for their operations by the year 2030 (Samsung Electronics Sustainability Report 2024, 2024, p. 17). According to the report, Samsung currently releases approximately 75% of water back, however the percentage of released water in water risk regions is only approximately 61%. Water risk regions are regions, in which the access to clean water is limited due to natural or man-made conditions (Water Risk Filter, n.d.). It is great that the goal is to release 100% of the water, however the current 61% in areas that are struggling even without the company's operations is something that should be bettered.

Samsung reports that they are using recycled resin with their plastic (Samsung Electronics Sustainability Report 2024, 2024, p. 63, 67). From the chart that is provided by Samsung, it does not become clear that what is the actual amount of the plastic waste, rather just how much they have used resin mixed with plastic and how many percent of their plastic usage is done with recycled resin mixed with plastic. The information could have been formatted in a better manner. It is unclear what the percentages of resin mixed with plastic are. Microplastics are found everywhere on the earth even in the arctic (Rhodes, 2018), so it would be important to report more clearly on this problem.

According to Samsung's reporting they the major global regulations set in place by different sources (Samsung Electronics Sustainability Report 2024, 2024, p. 79). Almost 100% of Samsung's suppliers have agreed to be audited (Samsung Electronics Sustainability Report 2024, 2024, p. 61). Samsung has not had any leakages of hazardous substances in 2021-2023 (Samsung Electronics Sustainability Report 2024, 2024, p. 64). The report states clearly that Samsung follow several different regulations when it comes to hazardous material, however the topic is not further expanded on (Samsung Electronics Sustainability Report 2024, 2024, p. 17).

Even though Samsung has some great goals, like transitioning to 100% renewable energy and restoring all water in future, they do have some questionable aspects that were not explained thoroughly enough. Plastic usage was not stated clearly, neither was the increase of some emissions.

#### **3.2.4 Social aspects**

Samsung reports that they have a separate council which purpose is to ensure that labour and human rights are met in every step of the supply chain (Samsung Electronics Sustainability Report 2024, 2024, p. 31). They report that, in addition, to having the council that makes sure that all rights are met, they also have a reporting channel through which stakeholders can report (Samsung Electronics Sustainability Report 2024, 2024, p. 33). They audit to make sure that the working conditions of supply chain workers are within standard (Samsung Electronics Sustainability Report 2024, 2024, p. 35; 43).

Training, support, and making sure suppliers are qualified is the way that Samsung ensures the safety of its supply chain workers (Samsung Electronics Sustainability Report 2024, 2024, p. 44). Samsung reports as a part of their efforts for equality, they have the goal of increasing women in leadership positions, however the percentages of women

in those positions range from 7-34% which is rather low (Samsung Electronics Sustainability Report 2024, 2024, p. 37).

Samsung has a lot of social initiatives they report on in this segment (Samsung Electronics Sustainability Report 2024, 2024, p. 45-47). All the initiatives involve technology. The location of the initiatives in most cases is not described. The ones which have the location stated are mostly in Korea. Two of the initiatives stand out as being good social initiatives, them being helping young people who are in foster care around the time they are turning 18 and fighting against cyberbullying.

Samsung and Honor are the only companies that report on what initiatives they have for disabled people. Samsung has an initiative where people with developmental disabilities are hired to bake food for the cafeteria (Samsung Electronics Sustainability Report 2024, 2024, p. 4, 37), which is a great initiative since people with disabilities have difficulty finding work (Vornholt et al., 2018). Additionally, Samsung has made their workplaces more accessible in several ways (Samsung Electronics Sustainability Report 2024, 2024, p. 37). The number of disabled employees has steadily increased in the last three years (Samsung Electronics Sustainability Report 2024, 2024, p. 59).

Samsung is actively trying to make sure that human rights are met throughout the supply chain with auditing and a council that tries to in advance prevent violations. However, the percentage of women in their leadership position is something that should be worked on in addition to describing in more detail their social initiatives. The initiatives towards disabled people were good.

### **3.2.5 Governance aspects**

The diversity of the board should be reported on (Corporate Sustainability Reporting Directive (CSRD), 2022, p. 31). Samsung does not in their reporting, mention the board composition nor the compensation of the board (Samsung Electronics Sustainability

Report 2024, 2024). However, according to the reporting, Samsung has focused on providing a salary that is enough for their workers (Samsung Electronics Sustainability Report 2024, 2024, p. 35). The structure of the workers' salaries is something that should be disclosed according to the European Union (Commission Delegated Regulation, 2023, p. 164).

Disclosing risk management strategies is important for stakeholders and in particular shareholders. Samsung has disclosed their risk management strategies for several different areas that are impacted by their operation, in addition to having an infographic for a quick overview (Samsung Electronics Sustainability Report 2024, 2024, p. 10, 13, 15, 17, 20, 23, 26, 28, 32, 39, 48, 50, 53). The overview is not good enough for the reader to get a grasp of the risk management systems in place. Overall risk management in Samsung according to the reporting is such that one body reports about a risk to another body. When the risk is acknowledged the risk management includes thinking of solutions for the risk and monitoring how the solutions work and adjust them as needed.

Corruption and bribery should be avoided in companies. Samsung reports about what they have done to prevent corruption and bribery (Samsung Electronics Sustainability Report 2024, 2024). For example, to avoid bribery external funding must be approved by the board (Samsung Electronics Sustainability Report 2024, 2024, p. 54), however according to Merriam-Webster (2025) a bribe is money given to an influential person for them to decide something in favor for the one giving the bribe (Bribe, 2025). Bribery is something done in secrecy therefore mandating people to approve large transfers of money with the board does not remove the risk of bribery. This is not a concrete action that Samsung has put into place, rather something every company has that does not impact the risk of bribery.

Concrete actions that Samsung has put into place for the risk of corruption to decrease are better than the actions against bribery. Whistleblowing channels are put into place by Samsung and are accessible in different languages and are confidential (Samsung

Electronics Sustainability Report 2024, 2024, p. 40). Whistleblowing channels are very important, since even though Samsung does conduct auditing (Samsung Electronics Sustainability Report 2024, 2024, p. 54), some things can be missed by the auditing team that can be then confidentially reported by workers from any part of the supply chain.

The interest of shareholders is described by an infographic (Samsung Electronics Sustainability Report 2024, 2024, p. 6). Shareholders best interest should be an important aspect of business strategies in companies that release shares. Samsung reports that they have several communication channels with shareholders, and they release all necessary information that backs up the shareholders best interest in the company. This means that they release documents about how the business is performing and ESG metrics.

Some factors are missing such as board composition and compensation. Risk management was discussed in some instances vaguely and in other instances with more detail. Anti-bribery measures were not so clear, however anti-corruption measures were clear and adequate. Shareholder interests were described, however they stated that they release, for example, ESG aspects of the company for shareholders and certain aspects of the ESG reporting are lacking.

### **3.3 OnePlus**

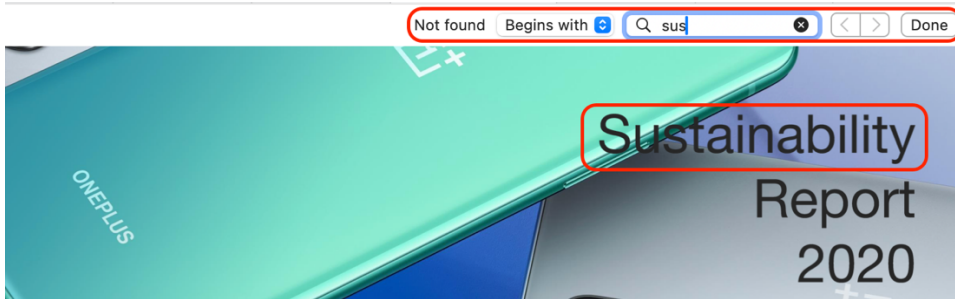
As of February 2025, the most recent report that can be accessed is the report for the year 2020. The report is older than the other companies' reports and therefore is not comparable with the other reports.. The report is going to be evaluated by the criteria provided earlier (see Chapter 3). The report is 57 pages long.

### 3.3.1 Ease of accessing the data

As of February 2025, the newest report that was found was the report for the year 2020. The company has not made any ESG reports after the year 2020 that would be easily accessible by the public, which raises the question of why they have not released newer reports. The year 2030 is an important milestone according to the Paris Agreement (The Paris Agreement., n.d.), the year 2030 is not far away, therefore it is somewhat concerning that they do not provide any updates. The report might not provide accurate reflection of carbon dioxide emissions and other aspects, since the pandemic was going on in 2020 (COVID-19 Timeline, 2024) meaning that the company was not working at full capacity.

From the perspective of a Finnish consumer the data is quite inaccessible. By searching “OnePlus kestävyyssraportti” which translates to OnePlus sustainability report, the consumer will find a link. The page that is accessed looks the same as the English equivalent to the point where the short text chapters look like they have been translated with AI (OnePlussan kestävyyssraportti 2020, n.d.). The report itself that is linked both in the English version (OnePlus Sustainability Report 2020, n.d.) and the Finnish version, is in English.

Accessing the sustainability report from OnePlus’ website does not work every time. If you are accessing the report while not in full screen mode or through your smartphone, the link disappears, and you can not access the report. OnePlus is known for producing smartphones, hence not being able to access the data from a smartphone is a rather odd choice from the company. If you are able to access the report the next odd aspect you will notice is that the text is most likely rasterized text meaning that the text is not actual text rather an image, this is illustrated in Image 2.



**Image 2.** OnePlus’ report’s text is most likely rasterized text (Sustainability Report 2020, n.d.).

The text not being formatted as text might not seem important, however many of the reports are over a hundred pages long (Environmental Progress Report, 2024; Samsung Electronics Sustainability Report 2023, n.d.). Even though OnePlus’ report is way shorter than the competitors’ reports (OnePlus Sustainability Report 2020, n.d.) being just under 60 pages, the rasterized text makes it more inaccessible for consumers. The reports tend to be long and if a consumer wanted to search for some specific information, for example carbon dioxide emissions, it would be much harder to find it due to the formatting.

### 3.3.2 The presentation of the data

The data is presented in a similar manner to other reports, except for the fact that the text is non-searchable (see Image 2). The report has a list of contents which does not have linking to the page number. Mostly the data is presented in a clear manner and is easily readable. Comparing to the other reports it has fewer visual infographics that would help the reader to find key values easily. The numerical values in this report were rather sparse, therefore there are not a lot of numbers to compare. Due to limited numerical values being presented, there are no numbers in different scales.

The report has several questionable solutions for presenting the data or mistakes have gone unnoticed. For example, the report has some spelling mistakes. In several parts of the report the genitive form of a word was formatted so that before the word was separate from the genitive ‘s, for example “each other ‘s successes” (OnePlus Sustainability Report 2020, n.d., p. 12) which makes the text harder to read. There were

several sentences that should have been cut off earlier but continued for too long which again makes the text harder to read. There were some sentences that spanned for nearly a chapter (see Chapter 3.3.4).

Most basic concepts like following the law were explained in too much detail so that you would have to read an entire page that could have in one sentence just stated that this aspect of the reporting is in accordance with the law. The report, in some aspects looked more like an advertisement (OnePlus Sustainability Report 2020, n.d., p. 6-10). There are some aspects of the report that seem like part of the reporting was missing (OnePlus Sustainability Report 2020, n.d., p. 19). The United Nations seventeen goals were used to visualize what aspects are going to be discussed in each chapter.

The visual outlook of the report is nice, however some aspects are lacking. The report has a lot of text without content. The text is non-searchable. The text has several mistakes and other shortcomings. Infographics are used less than with the competitors.

### **3.3.3 Environmental aspects**

The OnePlus report has a separate section in which they discuss environmental aspects of their company (OnePlus Sustainability Report 2020, n.d.). The length of the environmental aspects is shorter than all of the competitors (Environmental Progress Report, 2024; Environmental Social Governance Report (2023), n.d.; Samsung Electronics Sustainability Report 2023, n.d.; 2023 Sustainability Report, n.d.). In addition to the environmental part of the report being rather short, it is not comparable to the other brands, since it is from the year 2020 during the pandemic (COVID-19 Timeline, 2024) and the carbon dioxide emissions were smaller due to restricted operations. The other reports are of the year 2023.

OnePlus claims that they follow the ISO 14001:2015 as a basis for their environmental activities (OnePlus Sustainability Report 2020, n.d., p. 33). This International Standard

ISO 14001:2015 is behind a paywall and therefore is not accessible to a regular consumer (see Image 3). It is also a questionable business standard to state that the company follows certain rules, but the rules are not accessible. I was able to access a part of the ISO 14001:2015 (n.d.) for free and it was just a sample of the actual standard. The part that was able to be accessed for free was vague. In addition to the accessed limited version of the standard being vague, it was also published in 2015 just when the Paris Agreement (n.d.) was also agreed upon. OnePlus' report was about the year 2020, so using a five-year-old standard for a rapidly changing field, is rather questionable.

Discussing the carbon dioxide emissions from the company, OnePlus says that they use a standard from the year 2006 (OnePlus Sustainability Report 2020, n.d., p. 33). The report being of the year 2020, it is very outdated to use at that point a fourteen-year-old standard to measure the carbon dioxide emissions of the company. The Paris Agreement (n.d.) is commonly recognized as an important agreement when it comes to protecting the environment and it was published in 2015 meaning that the standard OnePlus is using was published 9 years before concrete protocols were placed. So, the data from this report is not comparable to the other companies' reports.

According to de Freitas Netto et al (2020) greenwashing is a term that is used when a company tries to appear environmentally friendly when they are not. Due to the rising interest in sustainable solutions, some companies will try to seem more sustainable in order for them to appeal to consumers who are interested in sustainability. This tied to the signaling theory, since the companies send out signals to appeal more to consumers. OnePlus (OnePlus Sustainability Report 2020, n.d., p. 34) reports that some of their initiatives to reduce carbon dioxide emissions include turning off air conditioners and computers when not in use, printing on both sides of the paper, using energy saving lamps in offices, and fixing broken faucets.

The concrete actions OnePlus provides, that were mentioned in the previous chapter, are actions that help to reduce the emissions in scopes 1 and 2. Scopes 1 and 2 are

emissions that are directly caused in the companies' facilities (Hertwich & Wood, 2018). Reducing the emissions from these categories is, of course, important, however looking at Apple's report we can see that scope 3 emissions are the biggest problem, not scope 1 and 2 (Environmental Progress Report, 2024, p. 88; 100). The most amount of emissions produced happens in scope 3 meaning outside of the company's facilities, due to the company needing components, resources, transportation of the components and resources, and shipping the finished products (Schmidt et al., 2022).

Discussing the recyclability, life cycle, and packaging of the products (OnePlus Sustainability Report 2020, n.d., p. 35-37), the report states aspects that are made to seem like they are taking the environmental aspects into consideration, however there are no concrete explanation. The only concrete example of their actions is visible in the reduction of the amount of plastic that is in their packaging. Stating vague actions and future plans is very common in ESG reporting and does not show the company's actual current actions (Kaplan & Ramanna, 2021, p. 12). Their phone recycling world-wide covered only 8066 mobile phones in the year 2020, which is a low number for the whole world.

Banning hazardous materials is one of the initiatives that applies both in the environmental and social category of ESG reporting, since it protects both the nature (environmental) and everyone in the supply chain (social). The part of OnePlus' report, which offers the most concrete actions, is the part where hazardous materials are discussed (OnePlus Sustainability Report 2020, n.d., p. 37). According to Cleveland Clinic (Arsenic poisoning, 2023) arsenic is a substance that can cause several different types of cancers and problems with internal organs; arsenic is one of the substances that was banned by OnePlus in 2020. Other substances mentioned also have similar health effects; [beryllium](#), [antimony trioxide](#), [chlorine and bromine flame retardants](#), [polycyclic aromatic hydrocarbons](#), and [phthalates](#) cause cancer and problems with internal organs ([Beryllium](#), n.d.; [Flame Retardants](#), 2025; [Hazardous Substance Fact Sheet](#), 2004;

Phthalates and Their Impacts on Human Health, 2021; Polycyclic Aromatic Hydrocarbons: 15 listings, 2021).

The use of these substances is already highly restricted, so OnePlus is just following the law while trying to make it seem like they are doing something groundbreaking (OnePlus Sustainability Report 2020, n.d., p. 37). The company is sending signals to consumers that they are being more sustainable, however further research done by the consumer would reveal that OnePlus is just following the law. This lowers OnePlus' signaling credibility.

The reporting about the environmental aspects is significantly shorter than the other companies' reporting and the reporting is outdated. In addition, to the report being outdated the standards and rules used for measuring emissions are outdated. The data is not comparable and is vague. Few concrete actions are provided and those that are provided are made to seem like OnePlus has done something revolutionary, when they are just following regulations.

#### **3.3.4 Social aspects**

The social aspects of OnePlus' report are rather short in length as are the environmental aspects (OnePlus Sustainability Report 2020, n.d., p. 40-47). The report social aspects are started with OnePlus stating that they follow the law by not using slavery or child labor, which is illegal. OnePlus states that they follow the concept of diversity (OnePlus Sustainability Report 2020, n.d., p. 40). They have used infographics to demonstrate their diversity, and by looking at the infographics, one could state that OnePlus is not a diverse company. Women represent under  $\frac{1}{4}$  of the company's employees and about  $\frac{1}{4}$  of the employees are foreigners in a multinational corporation.

Only 3% of employees are from ethnic minorities (OnePlus Sustainability Report 2020, n.d., p. 40). OnePlus reports that they treat all employees equally and proceeds to list

everything but sexuality, hence they probably are not accepting of people with different sexualities. There is no clear reason why the report should omit this part, and if done by accident it should be corrected. At least in Finland it is illegal for the employer to discriminate based on someone's sexual orientation as illustrated in Example 5.

- (5) "No one may be discriminated against on the basis of [ -- ] sexual orientation [ -- ]." (Non-discrimination Act (1325/2014), Section 8.1)

Talking about compensation, OnePlus reports that they do follow the law (OnePlus Sustainability Report 2020, n.d., p. 41). The report has dedicated one page to the compensation of the employees. The text describing the compensation is not easily readable, for example, there is one sentence that is 19 rows long and contains 14 commas. The reporting is done in such a manner that explaining that they abide by the laws, has been turned into two separate chapters when it could have been stated in one sentence, which makes this report harder to read.

The report has two concrete aspects of employee benefits that seem to be more than the law mandates (OnePlus Sustainability Report 2020, n.d., p. 41). One of them is that if the employee is conscientious worker, then they might get from one to four days of paid annual leave, after they have worked for years with the company. Having more paid time off work when you have worked for a long time with the company is a nice way of compensating the worker, however there is no way for the reader to know whether this is something that employees achieve often. The second concrete benefit is the benefit of employees being able to purchase OnePlus' devices for half of the price.

OnePlus reports that they provide training opportunities for their employees (OnePlus Sustainability Report 2020, n.d., p. 42-43). Two pages are dedicated to discussing the training opportunities. OnePlus seems to provide a lot of different courses and training possibilities to their employees, which are to enhance their capabilities in their own field. It was not mentioned whether partaking in these courses is compensated. The rather

low attendance numbers would indicate that the courses are either not compensated or not desirable. The company has invested slightly under 400 000 euros into training opportunities. The low participation rate in the courses might also be since the report was done during the COVID-19 pandemic (COVID-19 Timeline, 2024).

The report mentioned that one of the benefits of being an employee was a yearly health check (OnePlus Sustainability Report 2020, n.d., p. 41), however the health check seems to be in place due to workers having to work with hazardous substances (OnePlus Sustainability Report 2020, n.d., p. 44). The health and safety of the employees focuses largely on how they are preventing the spread of the COVID-19 pandemic. Additionally, OnePlus provides their employees with the possibility to partake in sports activities for an unknown price. The social aspect of this ESG report does not cover anything about their social initiatives for communities (OnePlus Sustainability Report 2020, n.d.). The social aspects applying to the workers from the supply chain that do not work directly for OnePlus, were in accordance with the law.

OnePlus reports that their code of conduct is against buying conflict minerals, which are tin, tantalum, tungsten, and gold (Conflict Minerals Regulation, n.d.; OnePlus Sustainability Report 2020, n.d. p. 51). Cobalt is used in batteries and even though it does not fall under conflict minerals, it is mined in similar areas to conflict minerals (Conflict Minerals Regulation, n.d.; Exposed: Child labour behind smart phone and electric car batteries, 2016), and OnePlus does not state in their report whether cobalt is used or not. OnePlus' competitors Apple and Samsung have been accused of using cobalt from mines that employ children and have dangerous working conditions.

The report was lacking fundamental parts such as the social initiatives of the company. Additionally, the report does not go into detail about how they support and ensure fair conditions to the supply chain workers, more than that they sign agreements. Positive factors were the lower phone purchasing prices for their own employees, potential

additional paid time off work, and sports options. The diversity of the company is not very great.

### **3.3.5 Governance aspects**

Risk management is an important factor in governance reporting, and OnePlus starts the governance section with reporting on risk management (OnePlus Sustainability Report 2020, n.d., p. 13). OnePlus reports that they use the three lines of defense model. The first line is where most of the mistakes should be caught, this is done by their business partners, the second line of defense is the internal control team that makes sure that no mistakes went unnoticed by the first line of defense and makes sure that everything is in accordance with the law, and the third line of defense is the auditing team that check all of the activities and are responsible for them (OnePlus Sustainability Report 2020, n.d. 13).

Another important factor of the governance aspect is to ensure that no corruption or bribery happens (What is ESG reporting?, 2024). OnePlus clearly states what their steps are for ensuring that no corruption or bribery happens (OnePlus Sustainability Report 2020, n.d., p. 15). OnePlus provides their employees with anti-corruption and anti-bribery training. They make their business partners and employees sign agreements stating that they won't partake in corruption or bribery. Finally, they have a channel where people are encouraged to report suspicions and violations of these agreements.

Having a channel through which violations can be reported is very important. OnePlus further describes that the way an employee can report their suspicion of a violations is through email (OnePlus Sustainability Report 2020, n.d., p. 16). There is no way of reporting the violations anonymously, and even though the company states that the whistleblower can not be punished in any way, the fact that violations can not be reported anonymously will deter people from reporting the information. The reporting channels are to the compliance team or straight to the chief executive officer of the

company, therefore if the violation is done by one of the members of the compliance team or the CEO, then there is no way of reporting it.

The interests of stakeholders and particularly shareholders are taken into consideration in the report (OnePlus Sustainability Report 2020, n.d., p. 20). There is an infographic to help the reader to visually see what actions are taken to ensure stakeholders' rights. However, there seems to not be many concrete steps to ensure, for example, shareholders' rights. There are channels through which stakeholders can communicate with the company, however there is no reporting on how the interests and rights are protected, further from the possibility to communicate with the company.

One important aspect of governance reporting is the composition and compensation of the board (What is ESG reporting?, 2024). The board composition must be reported on according to ESRS (ESRS G1 Governance, risk management and internal control, 2022, p.5). The report has no mention of the composition of the board nor the compensation of the board members, which lead stakeholders to use their imagination on why this information is not included in the report (OnePlus Sustainability Report 2020, n.d.).

Comparing to other companies' governance reporting, OnePlus lies in the better half of risk management reporting. They have a clear infographic to help the reader visualize the data. The governance reporting is better than Apple's governance reporting (Environmental Progress Report, 2024). OnePlus has great risk management. The reporting on anti-bribery and anti-corruption is detailed. OnePlus does mention stakeholders, however board composition and compensation is missing.

### **3.4 Honor**

As of February 2025, the latest report that can be accessed is the report for the year 2023. This makes the report comparable to all other companies except OnePlus. The

report is analyzed by the criteria provided earlier (see Chapter 3). The report is 156 pages long.

#### **3.4.1 Ease of accessing the data**

Out of all the companies, Honor has the best page in Finnish (Ympäristö Yhteiskuntavastuu Hallintotapa, n.d.). Even though they do not provide the ESG report itself in Finnish, they have the most information in Finnish from the companies in this analysis. The important parts of ESG reporting are briefly introduced in Finnish language.

The data and the report itself are easily accessed in English. There is an English web page from where you can download the report (2023 HONOR ESG Report Overview, n.d.). The page has infographics of the report's highlights for consumers that want quick answers. The report itself must be downloaded and opens separately as a PDF. The data is easily accessible.

#### **3.4.2 The presentation of the data**

Most of the report is readable and clear, however in some parts a simple concept is explained in a lengthy manner. The measuring units are presented in the same scale, hence they are easier to compare. Infographics were used, however some improvement should be considered in this aspect. One major problem of the reporting was the fact that some key elements of the ESG reporting were not available in the report itself, rather in some other report that was not easily accessible.

#### **3.4.3 Environmental aspects**

Honor has reported clearly their greenhouse gas emissions from the year 2021 to the year 2023 (2023 HONOR ESG Report Overview, n.d., p. 140). The greenhouse gas

emissions are reported separately in each scope. Scopes 1-3 emissions have risen substantially during the past three years after the pandemic (COVID-19 Timeline, 2024). During the reporting itself, Honor reported just how much greenhouse gas emissions were avoided, the number being 876 tons (2023 HONOR ESG Report Overview, n.d., p. 1; 21), the actual amount of greenhouse gas emissions was found in the appendix, and it has increased.

The amount of water consumed was not reported from the previous two years before the reporting year (2023 HONOR ESG Report Overview, n.d., p. 140). Companies should have a water management system in place for the environment not to be damaged especially in water risk areas. Honor does not include their water management plan in the report, however they do state that the plan can be found elsewhere (2023 HONOR ESG Report Overview, n.d., p. 117). The page that is found states that Honor's water management plan is that they ask their suppliers to reduce water waste and recycle water if possible (Supplier Corporate Social Responsibility, n.d.) which does not tell anything about the actions taken to conserve water.

Honor reports that their goal is to use 100% renewable energy in their operations by the year 2045 (2023 HONOR ESG Report Overview, n.d., p. 17, 20, 147). The reporting includes a very brief description of how Honor has set up solar panels. Reducing plastic is important for the environment, and Honor reports that they have increased the amount of biodegradable alternatives for plastic (2023 HONOR ESG Report Overview, n.d., p. 22), however there is no number for the amount of plastic used.

Honor reports that they avoid hazardous substances that are banned by regulations and additionally they have some legal substances banned that they deem hazardous (2023 HONOR ESG Report Overview, n.d., p. 25-26). Employees that are in contact with hazardous materials are provided with a yearly doctor's appointment (2023 HONOR ESG Report Overview, n.d., p. 110). The management plan is in a separate document, which

states that suppliers must abide by the law (Supplier Corporate Social Responsibility, n.d.) which is not a management plan.

Several aspects were lacking. The reporting about greenhouse gas emissions was good. However, different management plans were claimed to be in another document, which as of February 2025, had only very short descriptions that stated supplier must follow the law.

#### **3.4.4 Social aspects**

Honor's social initiatives are towards the youth (2023 HONOR ESG Report Overview, n.d., p. 77-81, 85-94). The initiatives include business start-up scholarships, combining art and technology in competitions, and projects together with a Mexican university. The initiatives were described in detail, however there were no initiatives that did not have to do with technology or art. There were no initiatives where Honor is helping different communities.

The report states that Honor follows human rights and labour rights (2023 HONOR ESG Report Overview, n.d., p. 120). Honor uses auditing as a tool to make sure that suppliers follow human and labour rights. In addition to conducting audits to make sure that the suppliers are following human and labour rights, Honor also brings in outside inspectors to see possible danger areas that can then be improved (2023 HONOR ESG Report Overview, n.d., p. 121). Other companies did not mention the possibility of third party inspectors coming to check the safety of facilities in addition to auditing. Having inspectors tell what needs to be improved is a great way to give suppliers concrete actions to make the workplace safer.

An important part of ESG reporting is reporting on the diversity and equality of the company's workers. Honor states that one of their initiatives is to provide special health check-ups for female employees as illustrated in Example 6. This is a good way for the

employer to show that they care for female employees since they represent only approximately 25% of the workforce (2023 HONOR ESG Report Overview, n.d., p. 141). Even though women represent  $\frac{1}{4}$  of the workforce, Honor reports that they provide an equal salary (2023 HONOR ESG Report Overview, n.d., p. 132). Honor and Samsung are the only companies that have reported on their initiatives towards people with disabilities. Honor provides offices that are accessible, in addition to making their technology accessible (2023 HONOR ESG Report Overview, n.d., p. 54, 63, 132).

- (6) “[– –] March 8, Mother’s Day, and other women-only holidays [– –] carry out special health checkups such as breast cancer screening and thyroid screening for female employees [– –]” (2023 HONOR ESG Report Overview, n.d., p. 105)

#### **3.4.5 Governance aspects**

According to the report Honor has a separate ESG committee, whose goal is to adjust their ESG strategy and make sure the company follows it (2023 HONOR ESG Report Overview, n.d., p. 10).

The board of Honor is not very diverse having only 14% women as well as 14% ethnic minorities (2023 HONOR ESG Report Overview, n.d., p. 142). These categories might overlap since no further explanation is provided. The compensation of the board is not reported. The number of ethnic minorities employed by Honor is 345 out of 13801 employees, which is only 2,5% of employees. Honor uses the same three line model in their risk management as some of the other companies, meaning that they identify the risk, analyze the risk and then adjust systems so that the risk is minimized.

Honor reports that bribery and corruption is against their policy and is forbidden (2023 HONOR ESG Report Overview, n.d., p. 131). They provide training for employees as a mean preventing corruption and bribery. However, there is no mention of how whistleblowers are protected, how the reporting works, or is it possible to report

anonymously. Stakeholders are taken into consideration by bettering the company and communicating more (2023 HONOR ESG Report Overview, n.d., p. 11).

### **3.5 Oppo**

The latest report that was able to be accessed, as of February 2025, is the report for the year 2023. This is comparable with Samsung, Apple, and Honor, since their most recent reports are also of the year 2023. As with the other reports, this report is analyzed and judged based on the criteria provided earlier (see Chapter 3). The report is 76 pages long.

#### **3.5.1 Ease of accessing the data**

One of the criteria of accessing the data is the fact if it is accessible to a Finnish consumer in their native language. Searching “OPPO Kestävyysraportti”, which translates to OPPO sustainability report, brings up only results in English. OnePlus and Apple had a page in Finnish that linked the English report, but OPPO does not even have a short page in Finnish. Though the brand’s success is quite new in the Finnish market (Linnake, 2024). The data in English is easily accessible. The data opens into a PDF file and is therefore easy to access.

#### **3.5.2 The presentation of the data**

When presenting the data, one important aspect is the scale on which numbers are presented. If the numbers are on different scales, it makes it harder for the reader to understand how the numbers compare to each other. For example, Apple has numbers that are in tons and some numbers that are in millions of tons (Environmental Progress Report, 2024, p. 88, 100) which makes comparing the numbers much harder. OPPO’s report states the numbers in the same scale, making the values easier to compare (2023 OPPO Sustainability Report, 2024, p. 44).

In addition to the numbers being in the same scale, the infographics benefit the readability. The report has a lot of great infographics that visualize more complex data in a simplified way, making the information more accessible to consumers (2023 OPPO Sustainability Report, 2024, p. 23, 40). In addition to having great infographics the text is not overly complex and lengthy in situations where it is not necessary. Meaning that if something can be stated in one sentence it is stated in one sentence and not in ten sentences, like in OnePlus' report (OnePlus Sustainability Report 2020, n.d.).

One major problem that occurs in this report, which also is a problem in OnePlus' report (OnePlus Sustainability Report 2020, n.d., p. 33) is the fact that some of the regulations they claim to follow are behind a paywall. If the reader wants to check what kind of regulations the company is talking about in a report, it is very difficult to do so if accessing the set of regulations costs over 100€ (2023 OPPO Sustainability Report, 2024, p. 60) (see Image 3). And they have several different sets of regulations that are followed. If a consumer would like to investigate properly the company's report they would have to invest quite a significant amount of money in doing so. This, of course, makes the presentation of the report content not accessible for a consumer.

### **3.5.3 Environmental aspects**

The critical aspect of the environmental part of the ESG reporting is the amount of greenhouse gas emissions that the company is responsible for. The greenhouse gas emissions are an important part of the reporting because the Paris Agreement mandates its member nations to reduce the greenhouse gas emissions so the companies must try to decrease their emissions (The Paris Agreement, n.d.). OPPO's report clearly states the carbon dioxide emissions from the different scopes (2023 OPPO Sustainability Report, 2024, p. 44).

OPPO's scope 3 carbon dioxide emissions are displayed separately from scope 1 and 2 (2023 OPPO Sustainability Report, 2024, p. 44). Scope 1 and 2 emissions are separately shown, and their sum is shown, and these numbers are compared to the year 2022's emissions; the emissions of scope 1 and 2 have decreased from the previous year. Scope 3 emissions are not calculated together nor does OPPO provide a comparison to the previous year. OPPO tells the reader with an infographic that its emissions in the year 2023 were the emissions of only scope 1 and 2 and with small print it states that it's from their own operations, however scope 3 emissions are also important to take into consideration (2023 OPPO Sustainability Report, 2024, p. 43). This is misleading information that could lower OPPO's signaling credibility.

Another important factor in the environmental category of ESG reporting is reporting on water and electricity consumption. OPPO has a very good infographic that visualizes the amount of energy consumed in the years 2021-2023 (2023 OPPO Sustainability Report, 2024, p. 47). An important factor of the Paris Agreement is to focus more on renewable energy (The Paris Agreement, n.d.), which has clearly happened with OPPO. They have decreased gasoline usage from the year 2022 to 2023 by approximately 66% and natural gas usage has decreased by approximately 75% from the year 2022 to 2023. The renewable energy usage has increased by around 230%. The water usage has improved slightly from year 2022 to 2023.

Reducing plastic is an objective commonly seen in more sustainable solutions. OPPO (2023 OPPO Sustainability Report, 2024, p. 50) states that in the European market the amount of plastic is rather minimal and that they have replaced several components of their packaging with more ecologically friendly solutions. However, they do not state how much plastic has been used as a part of their operations, they just state that they have reduced it. OPPO follows the laws and regulations about hazardous substances that are similar to those that were mentioned by OnePlus (see Chapter 3.3.3), however the difference is that OPPO states this directly and concisely.

The way that OPPO presents their carbon dioxide emissions is slightly misleading, lowering their signaling credibility. The information is verified by a separate party with the verification provided in the appendix (2023 OPPO Sustainability Report, 2024, p. 70). The shift towards renewable energy resources is astonishingly good. The water usage has been bettered. However, they do not mention a number for their plastic usage, which raises the question of why it is not public knowledge.

#### **3.5.4 Social aspects**

The use of conflict minerals is something a company should avoid doing. Conflict minerals are mined in unethical conditions, with forced labor, and children are working in the mines (Exposed: Child labour behind smart phone and electric car batteries, 2016). This is, of course, against all labor practices and human rights. Children under the age of 18 should not be working with hazardous materials according to the United Nations (Principle Five: Labour, n.d.). OPPO report that they do not use conflict minerals (2023 OPPO Sustainability Report, 2024, p. 66).

OPPO reports that all of their suppliers have committed to not using conflict minerals, and following human and labour rights, however only 78% answered the survey about the use of conflict minerals (2023 OPPO Sustainability Report, 2024, p. 66). The section discussing conflict minerals is better than with the other companies. OPPO reports that they do follow human rights (2023 OPPO Sustainability Report, 2024, p. 19; 53) and do not allow discrimination based on any factors, which they express in a better manner than OnePlus (OnePlus Sustainability Report 2020, n.d., p. 40).

The health and safety of the employees is very important. OPPO has reduced their hazardous waste from the previous year (2023 OPPO Sustainability Report, 2024, p. 47, 60), however they do not directly tell what concrete actions they have taken to reduce employees being in contact with hazardous substances. OPPO does provide health checks. The laws that OPPO follows are Chinese, since the company is located in China

(2023 OPPO Sustainability Report, 2024, p. 3). In addition, OPPO, in similar manner to OnePlus, states that they follow some standards from International Organization for Standardization that are not accessible to an average consumer due to them being behind a paywall (see Image 3).

An average consumer trying to find out more information about the social aspects of the company's ESG reporting will most likely not spend over 100€ on finding out what rules the company follows in their labour practices (see Image 3). The information being behind a paywall makes the reporting less accessible to the average consumer. OPPO did have 21 injuries in the workplace in 2023 and in the same page on an infographic they claim to have zero occupational accidents (2023 OPPO Sustainability Report, 2024, p. 60).

#### ■ SFS-EN ISO 45001:2023

Työterveys- ja työturvallisuusjärjestelmät. Vaatimukset ja niiden soveltamisohjeita

Tuote ladattavissa heti [Eskatselu](#)

Toimitustapa: Maksa ja lataa ▾

121,90 € (alv 0%)

138,97 € (alv 14%)

Julkaisu on ladattavissa pdf-tiedostona heti maksutapahtuman jälkeen. Jos haluat maksaa sähköisen julkaisun laskulla, valitse toimitustavaksi sähköpostitse (lasku on saatavilla yrityksille).

[Lisää ostoskoriin](#)

**Image 3.** The paywall for the ISO standards (SFS-EN ISO 45001:2023, 2023)

Social initiatives are an important part of being a sustainable company. OPPO has six social initiatives they discuss in the report (2023 OPPO Sustainability Report, 2024, p. 68-69). When comparing the social initiatives with Apple's reporting on their (Environmental Progress Report 2024, n.d., p. 31) initiatives, OPPO describes concrete actions and figures on what they have done and where. They support a chance for youth to play football both boys and girls, they have focused on the environment by planting trees, supported education, and improved many lives.

OPPO is actively working to avoid the use of conflict minerals. They do follow human rights and labour laws, but accessing the standards they follow is hard. The reporting on

the work-related accidents and injuries is questionable. However, OPPO has great social initiatives that are described in detail.

### **3.5.5 Governance aspects**

One important factor of the transparency of the governance aspect in ESG reporting is reporting on the board composition and compensation. OPPO does not inform the reader of the board composition nor the compensations of the board members in this report (2023 OPPO Sustainability Report, 2024).

The risk management of OPPO consists of information and climate change management (2023 OPPO Sustainability Report, 2024, p. 23, 40). The information security management is visualized with an infographic. OPPO utilizes the same three-line tactic that OnePlus also uses. This means that they analyze and try to catch security breaches at each level. The infographic visualizes the structure in a great manner that makes the data more accessible to the consumer. In addition, they have categorized possible threats and how they manage the risks of these threats.

The risk management includes plans of actions as well as certain actions that are already in place (2023 OPPO Sustainability Report, 2024, p. 40). For example, a lot of actions imply that they will in the future research or do something, and concrete actions involve monitoring the surroundings and training their personnel for certain situations. As a part of OPPO's risk management, they have increased the communication with stakeholders, which is an important aspect of the transparency of the operations.

The interests of stakeholders and in particular shareholders are a very important component of the governance reporting. Shareholders' interests should be a priority for a company that releases shares to the market. OPPO touches on the shareholder subject by reporting that announcements, conferences, and reports are the way they communicate with their shareholders (2023 OPPO Sustainability Report, 2024, p. 16),

however OPPO does not report on how they keep the shareholders best interest in mind. They have done an infographic about stakeholders, which shows each ones concerns and how they communicate, however there is no additional explanation, the information is just briefly stated.

Discussing the anti-corruption and anti-bribery protocols OPPO has in place has some shortcomings (2023 OPPO Sustainability Report, 2024, p. 21). This section also includes referencing to a set of rules that lies behind a paywall, which makes it hard for a regular consumer to access each set of rules that the company follows. OPPO states that they do supervise, train, and inspect or corruption and bribery. However, one key factor is missing, OPPO does not report about how whistleblowing is done. OPPO does not explain whether reporting is anonymous or not, and how the whistleblowers are protected. This ties to shareholder interests, if employees do not feel safe on reporting violations, it might lead to not prioritizing shareholder interests.

OPPO does not inform the reader about the board composition or compensation. They do explain their risk management well, however the reader is left with questions since examples are not provided. The shareholders best interest and whistleblowing activities are described rather vaguely.

## **4 Methodology**

### **4.1 Research method selection**

The research method selection includes two steps. The first step was analysing the ESG reports of the five case companies chosen for this thesis. The research method used in this step was analysing secondary data (Vartanian, 2010, p. 3) with a mixed method approach. The second step was collecting data with a survey that implemented a mixed method approach. The secondary data analysis will provide the reader with important information that aids in the analysis of the collected data. The analysis provided insight that aided in the creation of the survey in a manner where the most relevant data can be gathered.

Secondary data can bring valuable additional insight (Vartanian, 2010, p. 3). The analysis of the case companies' ESG reporting was done implementing a mixed method approach. Mixed method approach uses both qualitative and quantitative approaches (Byrne & Humble, 2007, p. 1). In the analysis of the ESG reports both qualitative and quantitative data was gathered. Qualitative aspects that were taken into consideration were, for example, the outlook of the reports and stylistic choices. Quantitative aspects that were analysed were numerical values, for example, emissions and percentages.

The main research method was a survey that implemented a mixed method approach, where both qualitative and quantitative questions were asked (Byrne & Humble, 2007, p. 1). The mixed method approach allows to gather more accurate data than if only qualitative or quantitative method were to be used.

### **4.2 Data collection**

The data collection method was a survey. The survey was created on Google Forms. This method was selected due to a few different reasons. Using an online platform for the

data collection method allowed the survey to be spread further than it would have been spread if it were done on a paper. Additionally, the survey had more anonymity online than it would have had if it were done on paper.

According to Robertson et al (2018) participants were most likely to answer honestly about sensitive topics online, therefore distributing the survey online guaranteed the highest probability of receiving honest answers. The anonymity was crucial due to the content of some of questions. If the data gathering method would not have been anonymous the respondents would most likely not tell their honest opinion, since it might be an opinion that is not popular. For example, there were open questions about finding a sustainable solution or the use of child labour, which now gathered the honest opinions of the respondents, since they knew it would not be linked back to them.

The chosen platform for the survey was Google Forms was chosen for two main reasons. First, the platform provides a possibility to answer anonymously, which as stated earlier, was an important factor. Second, Google Forms has a several different question types that allowed for the mixed method approach. The selection of questions was important in order to gain a deeper understanding of the respondents and finding out the validity of the hypotheses. The quantitative data is easy to extract out of the platform to other platforms for deeper analysis, which was an important factor when choosing this platform.

### **4.3 Data analysis**

The data that was analysed were the smartphone companies' ESG reports and the survey responses. There were five companies, whose ESG reports were analysed. The survey gathered 64 responses. The survey had both qualitative and quantitative questions, meaning that the data was analysed two different ways. The quantitative questions had a prepared set of possibilities how to answer, meanwhile qualitative questions were

open-ended, and some answers were not taken into consideration due to them not being high quality enough.

The quantitative questions were analysed based on the percentages of certain answers and how many people answered, for example, yes and how many no. The qualitative questions were analysed based on the content of the answers and how the answers brought more insight about consumer behaviour. The mixed method provided a deep knowledge of the effects of ESG on consumer behaviour. Pie charts were used to visualize some important data.

#### **4.4 Validity and reliability of the data**

The 64 people who answered the survey, is a sample size of the targeted population. A representative sample size is a sample population that should represent the real population and have similar traits (Grafström & Schelin, 2013). This sample size represents best people who are employed and students. The results are not a valid representation of unemployed or retired consumers, since they were underrepresented in the survey. 46,9% of the respondents were employed and 51,6% of the respondents were students. Different age groups were well represented except for people aged over 60.

The survey had some questions that were answered honestly, because the survey was anonymous (Robertson et al., 2018). The data is reliable because mixed method approach was implemented, making the gathered data more thorough. The ESG reports were taken straight from the publishing companies and were therefore reliable.

#### **4.5 Ethical considerations**

The participants were informed the purpose of the survey and what the gathered data will be used for. The participants were informed that the survey is anonymous. Participation in this data collection was voluntary, since the possible respondents had the choice to not open the survey link further to not participate in the data collection. The collected data is stored in the platform that the survey was conducted in and in the Google Sheets document in which quantitative data was analyzed. The author of this thesis is the only one who has access to this data and the data was not used for any other purposes. The survey had a few questions, which answers could be considered as sensitive data, however since the participants were informed that the survey was anonymous, they felt comfortable sharing their honest opinions.

## 5 Findings

The representation of different phone brands was as follows. Majority of respondents owned an Apple smartphone the percentage being 64.1%. Samsung was the second most popular option with 17,2%. OnePlus was owned by 7,8% and Honor was owned by 3,1%. No one answering the survey owned an OPPO smartphone. Other brands owned by the respondents were Huawei, Motorola, Nokia, and Sony. According to Linnake (2024) the smartphone brand OPPO has not reached top selling smartphone lists earlier and its popularity has risen just recently due to the affordable pricing.

The three hypotheses discussed previously (see Chapter 1.4) are below. The hypotheses together were such that the consumers' purchasing decision is not impacted by the sustainability reporting, since they are rather lengthy therefore making the information inaccessible for an average consumer. However, when the information about a company's sustainability gets largely publicized it is more likely to impact the purchasing decision of a consumer.

**Hypothesis 1:** Sustainability is not an important factor in the purchasing decision

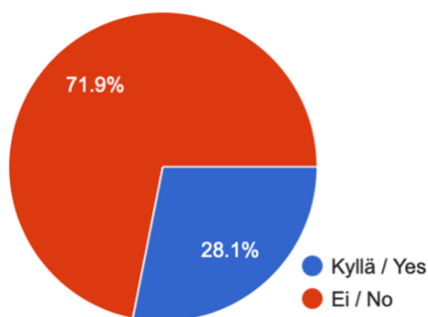
**Hypothesis 2:** Crimes against sustainability by a company that get notable publicity, impact the consumers purchasing decision.

**Hypothesis 3:** The length of ESG reporting makes it harder for consumers to choose a more sustainable solution

First, the respondents were asked which factors impacted their purchasing decision. Multiple answers were allowed and options included pricing, brand, camera quality, storage, screen size, operating system, and the sustainability of a company. The purpose of this question was to find out what percentage of the respondents would categorize sustainability as an important factor in their purchasing decision. As hypothesized, only 7,8% of respondents chose sustainability as an important factor in their purchasing decision. Operating system, price, and brand were the most popular factors in purchasing decision, with camera quality and storage being rather popular also. Based

on these answers the respondents can be categorized into either communicators (brand) or choosers (features) based on the consumer behaviour theory (Szmigin & Piacentini, 2018, p. 24).

According to Halbritter and Dorfleitner (2015) a company's ESG rating does not correlate with the return the company gets, therefore sustainability is most likely not an important factor in the purchasing decision. As hypothesized, sustainability was not an important factor. As ESG is a way to measure a company's sustainability (Clément et al., 2022). ESG reporting would hence be a great way to determine a company's sustainability. Therefore, reading an ESG report would be crucial for a consumer to make an informed decision about the sustainability of a company. As mentioned earlier, the ESG reporting was lengthy and overexplained a lot of simple concepts. If a consumer was to consider sustainability as an important factor, they would have to analyse a few different ESG reports. If the choice would be between three different companies, the average amount of pages to analyse would be slightly less than three hundred.

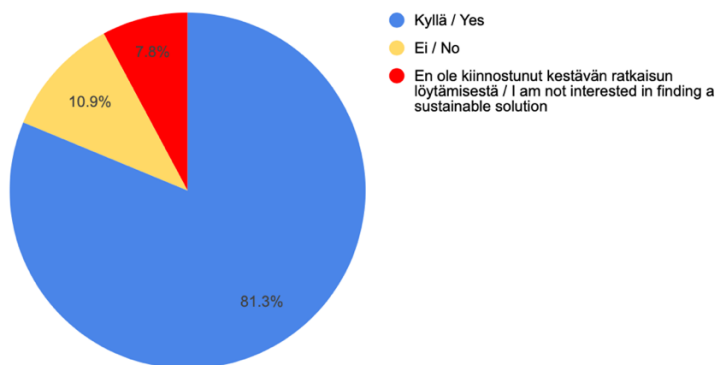


**Figure 4.** The percentage of respondents that have familiarized themselves with an ESG report before.

Only slightly more than  $\frac{1}{4}$  of respondents had familiarized themselves with an ESG report (see Figure 4). This supports hypothesis 1 and 2, since the sustainability is only a factor when something gets widely publicized. Especially hypothesis 1 is supported by the fact that if sustainability would be an important factor in the purchasing decision, then the percentage of people who had familiarized themselves with an ESG report would be much higher. The 7,8% of people who stated that sustainability is an important factor

did not actually belong in the 28,1% of people who had familiarized themselves with an ESG report. 80% of the people who responded that sustainability is a factor in their purchasing decision were under the age of 25 and students.

The third hypothesis was that the length of ESG reporting makes it harder for consumers to find the most sustainable solution. The average length of the reports of the five companies analysed in this thesis, was 97 pages. For example, if a consumer stated that camera quality is an important factor they can find the megapixels within a few seconds, which makes comparing different models a lot easier. Other common qualities are also easily accessible, however if a consumer would like to compare even only two companies reporting it would mean reading an average of 194 pages. In addition, to reading they would have to compare the reports with each other, which is very time consuming making the comparison inaccessible for an average consumer.



**Figure 5.** The answers for the question does the length of ESG reporting make it harder to find a sustainable solution.

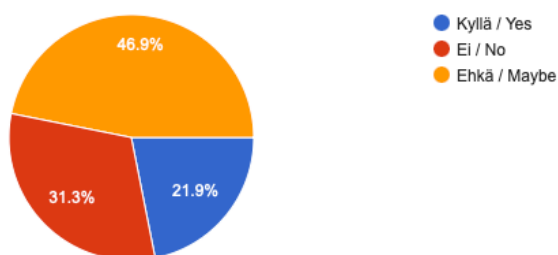
The third hypothesis was supported very clearly. 81,3% of respondents stated that they feel like the length of the ESG reports is a hindering factor for finding the more sustainable solution (see Figure 5). Every single one of the 7,8%, who stated that sustainability is an important factor, also stated that the length of the ESG reports makes it harder for them to find the more sustainable solution. The people who found the length of the reporting to be a hindering factor were of all ages, had different smartphone brands, and were both employed or students. 83,3% of respondents who

had familiarized themselves with an ESG report thought that the length of the reporting was a hindering factor in finding the solution.

Hypothesis 3 was well supported. A majority of the respondents thought that the length of the reporting makes it harder to find a sustainable solution. Out of the respondents that had previously familiarized themselves with an ESG report, the majority thought that the length of the report would prevent them from finding the more sustainable solution. Hypothesis 3 is therefore well supported by the data.

The data shows that an average consumer does not consider sustainability as an important factor in their purchasing decision the percentage being 92,2%. However, hypothesis 2 states that sustainability would impact the purchasing decision of a consumer if crimes against sustainability by a company were to receive notable publicity. The survey questions were created so that they would provide more insight about the hypothesis.

To find out more about the environment aspects of ESG, respondents were asked questions about carbon dioxide emissions. The question was that if a company's emissions were above average would it impact the consumer's purchasing decision. Only 21,9% answered that above average emissions would impact their purchasing decision, 31,3% answered that it would not, and 46,9% answered that it might impact their decision (see Figure 6). This adds additional clarification to the hypothesis 1, making it more clear what parts of ESG do impact the consumers intent to purchase a smartphone.



**Figure 6.** Would above average carbon dioxide emissions impact the consumer intent to purchase.

The respondents were asked to comment why the above average emissions would or would not impact their purchasing decision. The answers were categorized into three main categories. First, people who would take this into account when purchasing, those who would not take into account, and then people who stated that it is hard to find the information. In example 7 one of the respondents states that if an abnormality in a company's sustainability would come to their attention it would impact their decision (as illustrated in Example 7). A lot of other respondents shared the same idea. This supports the hypothesis 2.

- (7) "If it came to my knowledge that one company's emissions were noticeably higher in comparison with other companies, I would take this into consideration when purchasing"

Only 7,8% stated that sustainability is a factor in their purchasing decision and 80,0% of them replied that higher emissions would impact their purchasing decision. Some people simply appreciated other attributes more than sustainability or did not care about sustainability at all (as illustrated in Example 8). Tying into hypothesis 3, some consumers stated that finding information about abnormalities in a company's sustainability is hard (see Example 9). This would require the abnormality to be significant enough to get largely publicized and then would impact the consumers decision, which supports hypothesis 2. For some consumers sustainability is an important factor (see Example 10).

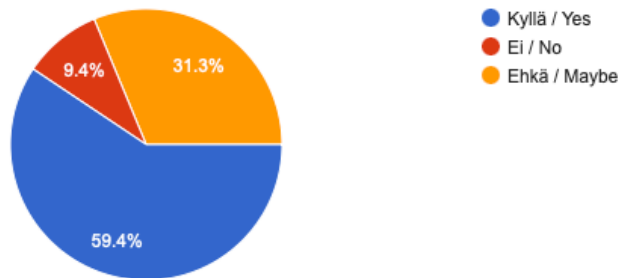
- (8) "I do not care"

- (9) "It would be hard to compare different companies' ESG reports"

- (10) "I try to support companies striving for sustainability, because nature and sustainability are important topics for me"

All the people who answered that above average emissions would impact their purchasing decision, also stated that abnormalities in the social and governance aspects of ESG would impact their purchasing decision. People who cared about the environment cared about social and governance aspects, however the respondents who cared about social or governance aspects did not necessarily care about other sustainability aspects.

Social sustainability means that everyone in the company's supply chain has humane working conditions (Frydinger, 2024, p. 242-243). Respondents were asked whether unethical working environments in a factory located abroad would impact their purchasing decision. 59,4% answered that the unethical conditions would impact their purchasing decision, 31,3% answered that it might impact, and only 9,4% answered that unethical conditions would not impact their purchasing decision (see Figure 7). This adds clarity hypothesis 1, by showing which aspects of ESG are important to the consumer.



**Figure 7.** Do unethical working conditions impact the intent to purchase.

The effect of inhumane working conditions on consumers purchasing decision could be roughly categorized into three groups. Some respondents found other factors more important. For example, some consumers are loyal to a brand and stated that a revelation about poor working conditions would most likely not sway their loyalty. Other qualities, like cheap price, were also factors that some consumers appreciate more (see Example 11). Within the answers it was common that consumers felt that the inhumane working conditions were not common knowledge and therefore they could not avoid the companies. Further, if the information became public knowledge, then it would impact

their decision possible as illustrated in Example 12 (see Example 12), which supports hypothesis 2.

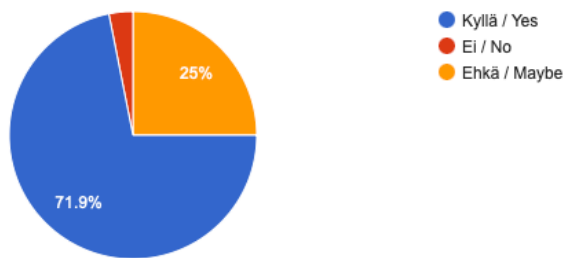
- (11) “Cheap price is the most important factor”
- (12) “Should be a bigger scandal [to find out about the poor conditions]”

Within the respondents there was a trend in which respondents thought that the working standards are significantly poorer than what consumer would like as demonstrated in Example 13 (see Example 13). In addition, consumers thought that if the source of the information about working conditions originated from the company or factory itself, that the information is not trustworthy as demonstrated in Example 14 (see Example 14). This can be explained by the signaling theory, because a company wants to signal being better than they might be. Some respondents wanted to choose the more sustainable and ethical product, however the lack of trustworthy knowledge and the inaccessibility of the reporting were factors that made it harder for the consumer to choose the better option, which supports hypothesis 3. A consumer that wants to choose the more sustainable option can be classified as an activist from the consumer behaviour theory (Szmigin & Piacentini, 2018, p. 24).

- (13) “I presume that all factories have bad working conditions by European standards. If the conditions were significantly worse, it would impact my purchasing decision”
- (14) “Factories in the Far East do not provide credible knowledge [about working conditions]”

Bribery is an example of a company not being sustainable (Frydinger, 2024, p. 253). Respondents were asked whether a company bribing officials would impact their purchasing decision, if it affected the quality of the item they were purchasing. 71,9% answered that it would impact their decision, 25% answered that it might impact and only 3,1% stated that it would not impact their purchasing decision (see Figure 8). We

can deduce that if an abnormality would directly impact the quality of the product a consumer is purchasing then the percentage of people who would take the factor into consideration is significantly higher than in abnormalities that do not directly impact the quality of the purchased product. This adds more clarity to hypothesis 1 by clarifying, what aspects of ESG impact a consumer's intent to purchase a smartphone.



**Figure 8.** Does bribery, that impacts the quality of the product, impact the purchasing decision?

Respondents were questioned whether feature certificates for products received through bribery would impact their purchasing decision. Majority of the respondents thought that it would be unfair for the consumer to purchase an item believing it had some attributes that it does not have (as illustrated in Example 15). According to the consumer behaviour theory choosers purchase certain products because of attributes they have (Szmigin & Piacentini, 2018, p. 24). If a consumer were to purchase a product solely based on a feature that the product did not have they would not trust the company anymore lowering the company's signaling credibility.

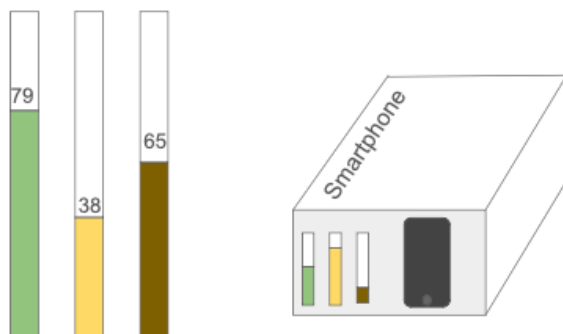
- (15) "For example, a product being waterproof can be the reason why the particular product is chosen, and it would be very disappointing if the product would not work as promised."

Some respondents thought that their actions would not be strong enough to impact the company's business decisions. These consumers did not believe that they could be the activist from consumer behaviour theory (Szmigin & Piacentini, 2018, p. 24). If enough people were to be activists, the signals they would send to the company would need to be taken into consideration.

- (16) “One person’s consumer behaviour does not impact the operations of the company.”

Amongst all the other answers there was a suggestion of making an ethics ranking for products similar to the energy efficiency rating in household appliances (as illustrated in Example 17). This would make it easier for the customer to choose a more sustainable solution and would make sustainability a more accessible feature for consumers. With the new European Sustainability Reporting Standard this could be feasible if every aspect were given a concrete numerical scale that needs to be followed (The Commission adopts the European Sustainability Reporting Standards, 2023).

- (17) “It would definitely impact my decision. Receiving trustworthy information is crucial. There should be an ethics rating similar to household appliances’ energy efficiency ratings. This way the consumer would quickly get an understanding of how ethical the product is. The ethics rating would take into consideration different factors. If a company is environmentally friendly enough, could they in that case treat employees worse? Maybe the ratings should be separate in different categories of ESG.”



**Image 4.** A proposal on how sustainability ratings could be incorporated into product packaging.

## 6 Conclusions

The goal of this thesis was to find out more about how ESG is connected to consumer behaviour. The three hypotheses below were set before gathering the data. The three hypotheses together formed an assumption that due to the length of the ESG reports consumers did not care to have sustainability as a feature in their decisions, further if a crime against sustainability would get notable publicity, then the consumer would know about it, and it could be a part of their decision.

**Hypothesis 1:** Sustainability is not an important factor in the purchasing decision

**Hypothesis 2:** Crimes against sustainability by a company that get notable publicity, impact the consumers purchasing decision.

**Hypothesis 3:** The length of ESG reporting makes it harder for consumers to choose a more sustainable solution

The theoretical framework consisted of two theories, which were the signaling theory and the consumer behaviour theory. Based on these two theories the data was analysed. The data was gathered in two different ways. First, the ESG reports of the case companies were analysed using the mixed method approach. The ESG report data was secondary data and both qualitative and quantitative data was analysed. Then a survey was created using the mixed method approach. The survey was an anonymous online survey.

Some of the companies reported in their ESG reports that they follow certain rules and regulations that were not publicly available for free. The ESG reports analysed for this thesis were of the year 2023, except for one, and therefore the reports were not yet created based on the new European Sustainability Reporting Standard. The lack of a global centralized system for reporting was visible.

The reports had in common the fact that the text was too long for simple concepts, therefore making it harder to read and analyse for the consumers. The average length of the reports was 97 pages. Some reports had the quantitative data in differing numerical

scales within the report, making it harder for the reader to compare values. Some reports presented their data in a misleading manner lowering the company's signaling credibility.

Consumers were mainly communicators and choosers from the consumer behaviour theory, choosing smartphones based on either features or brand with which they signal something according to the signaling theory. Of the respondents a majority were either employed or students. Only roughly a fourth of the respondents had familiarized themselves with ESG reports before, which is as expected quite a low number.

The people who stated that sustainability was important to them had not read an ESG report. This means that they can not choose the sustainable option. They want to signal being sustainable, however they do not do any research about a company's sustainability. A majority of respondents stating sustainability was an important factor were under the age of 25, which means that sustainability is more popular with younger people. Most of the respondents found that the length of the ESG reports made it harder to find a sustainable solution.

People who cared about environmental aspects of ESG also cared about social and governance aspects, but those who cared about social or governance aspects did not necessarily care about other sustainability aspects. Some people felt that sustainability was not important at all and appreciated some other product features more.

People thought that even if a company had crimes against sustainability, the company would try to keep their image good and cover up the crimes. This ties into the signaling theory and the company wanting to send out controlled signals, that benefit their image. Consumers thought that even if they were to try to an activist or a rebel from the consumer behaviour theory, their individual actions would not impact the company. Further, if everyone else purchases a product disregarding sustainability, why should they compromise on features they want, to purchase a more sustainable option.

An ethics rating was suggested (see Image 4) that could make it easier for consumers to choose a more sustainable solution. If the ethics rating were to be incorporated in product packaging, consumers would not have to read hundreds of pages of text to find a sustainable solution. This ethics rating could be a possibility in the near future due to new legislation about ESG.

Sustainability was not an important factor for many consumers, because other features were more important to them. To those that do care about sustainability, the length of ESG reporting made it harder to find sustainable solutions. For companies, this information is valuable. Companies could make shorter and more clear reports, which consumers could more easily read and compare to other reports, making sustainability an easier feature to research. Further, the ethics rating would make it effortless to choose a sustainable option.

Currently, there is a research gap about how ESG affects consumer behaviour. This thesis has brought valuable insight on how ESG and consumer behaviour connect to each other. The tie between these could be made stronger if ESG reports were more concise and formatted in a clear manner.

Some consumers did not see sustainability as an important factor, which means that hypothesis 1 was partly correct. Hypothesis 2 was partly correct, since the consumers who thought sustainability was important took crimes against sustainability into account, however those who did not think sustainability was not important did not take crimes against sustainability into account. Hypothesis 3 was correct, since people thought that the length of the ESG reports was a hindering factor in choosing a sustainable solution.

This study was conducted from the perspective of Finnish consumers, therefore the findings do not directly apply to other regions. The sample size was restricted therefore the study might not reflect the true nature of the Finnish population. Future researchers

could gather similar data, but in different or larger regions. A study could be conducted where there would be modified ESG reports that were modified based on the data gathered in this study and see how consumers react to shorter reports or ethics ratings.

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## Appendices

### Appendix 1. Survey questions

Mikä kuvastaa sinua parhaiten? \*

Which one applies best?

- Opiskelija / Student
- Töissä käyvä / Employed
- Työtön / Unemployed
- Eläkeläinen / Retired

Ikäsi? \*

Your age?

- <19
- 20-25
- 26-30
- 31-40
- 41-50
- 51-60
- >60

Minkä merkkisen puhelimen olet viimeisimpänä omistanut/ostanut? \*

What phone brand did you most recently purchase/own?

- Apple
- Samsung
- OnePlus
- Honor
- Oppo
- Muu / Other

Jos vastasit "muu", niin mikä?

If you answered other, what brand do you have?

Short-answer text

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Mitkä tekijät vaikuttavat ostopäätökseesi? (voit valita useamman vaihtoehdon) \*

Which factors impact your purchasing decision? (you can choose multiple options)

- Hinta / Price
- Merkki / Brand
- Kameran laatu / Camera quality
- Tallennustila / Storage
- Näytön koko / Screen size
- Käyttöjärjestelmä / Operating system
- Yrityksen kestävyys (ESG) / Sustainability of the brand (ESG)

Oletko koskaan tutustunut jonkin yrityksen ESG raporttiin? \*

Have you checked out a company's ESG report ever?

- Kyllä / Yes
- Ei / No

Jos yrityksen CO<sub>2</sub> (hiilidioksidi=kasvihuonekaasu) päästöt ovat keskiarvoa korkeampia, vaikuttaisiko tämä ostopäätökseesi? \*

If a company's CO<sub>2</sub> (carbon dioxide=greenhouse gas) emissions are above average would this impact your purchasing decision?

- Kyllä / Yes
- Ei / No
- Ehkä / Maybe

Perustele vastauksesi edelliseen kysymykseen \*

Justify your answer for the previous question

Long-answer text

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Jos yrityksen ulkomailla olevilla tehtailla olisi epäeettiset olosuhteet (lapsityövoimaa, huonot työolot tmv.) vaikuttaisiko tämä ostopäätökseesi? \*

If a company's factories in foreign countries had unethical conditions (child labour, bad working conditions etc.) would this impact your purchasing decision?

- Kyllä / Yes
- Ei / No
- Ehkä / Maybe

Perustele vastauksesi edelliseen kysymykseen \*

Justify your answer for the previous question

Long-answer text

---

Jos saataisiin selville, että yrityksen johto on lahjonut viranomaisia siten, että heidän tuotteilleen on annettu sertifikaatteja ominaisuuksista mitä ei ole, vaikuttaisiko tämä ostopäätökseesi? (esim. puhelimella olisi sertifikaatti vedenpitävyydestä, mutta se ei olisi vedenkestävä) \*

If it were found out that a company's higher ups had bribed officials to give their products certifications of features that the products don't have, would this impact your purchasing decision? (eg. a phone would have a certificate that states it is waterproof, but it actually is not)

- Kyllä / Yes
- Ei / No
- Ehkä / Maybe

Perustele vastauksesi edelliseen kysymykseen \*

Justify your answer for the previous question

Long-answer text

---

Jos saataisiin selville, että yritys hidastaa vanhempia puhelimiaan uusien puhelinmallien tullessa markkinoille, vaikuttaisiko tämä sinun ostopäätökseesi? \*

If a company would slow down their older phone models as new models are released, would this impact your purchasing decision?

- Kyllä / Yes
- Ei / No
- Ehkä / Maybe

Perustele vastauksesi edelliseen kysymykseen \*

Justify your answer for the previous question

Long-answer text

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Kuinka paljon luulet seuraavien yritysten tuottaneen hiilidioksidipäästöjä? (yksi numero voi olla useamman yrityksen päästöjen määrä)

How much do you think the following companies have produced carbon dioxide emissions?  
(one number can be the emissions of multiple companies)

mt= miljoonaa metristä tonnia / million metric tons

	> 100 000 mt	50 000 - 100 000 mt	10 000 - 49 999 mt	1 000 - 9 999 mt	< 1 000 mt
Apple	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Samsung	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
OnePlus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Honor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oppo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Monet ESG raportit ovat yli 100 sivua pitkiä. Koetko, että raporttien pituus haittaa sinua valitsemaan kestävämmän vaihtoehdon? \*

A lot of ESG reports are over 100 pages long. Do you think that the length of the reports makes it difficult to choose a more sustainable option?

Kyllä / Yes

Ei / No

En ole kiinnostunut kestävästä ratkaisusta / I am not interested in finding a sustainable solution