Lauri Fontell

Value Created by Environmental Sustainability

Finnish Consumers' Views on Eco-Friendliness and Corporate Governance of Environmental Matters

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Author: Lauri Fontell
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ABSTRACT:
Environmental concerns have risen among individuals globally. Extreme weather conditions and storms are becoming more and more everyday causing disruption, hunger, and health problems. Therefore, sustainability has become a significantly important topic also in business. Companies must take action to reduce the impact their operations have on the environment and this way ensure a viable planet Earth for future generations as well. Also, preserving the environment is important for companies to ensure the perpetuity of their business operations. Taking environmental matters into account can also financially benefit companies, since it is likely to increase customer and stakeholder satisfaction and sustainable practices such as renewable energy choices, recycling and reusing can bring manufacturing-related costs, such as material and energy costs down. Corporate governance also plays an important role in improving environmental sustainability since sustainability matters are tightly tied to the company's system of rules and practices by which the company is managed. Strategic planning, goal setting and adapting adequate managerial practices are important contributors to the successful implementation of environmentally sustainable practices.

This study aims to form a general understanding of sustainability, its building blocks and corporate governance of environmental matters. Also, with the help of the empirical part, the opinions, and points of view of Finnish consumers are studied and analyzed since there has not been research on the topic limited to Finland. The goal is to make the conclusion that taking environmental sustainability into account in business creates additional value to companies' stakeholders and how companies could improve their corporate governance of environmental matters, especially in terms of the parts that are visible to the consumers as well. Quantitative research was conducted by collecting answers to a survey that consisted of different multiple-choice questions regarding the topic. The data collected was analyzed and presented with different graphs and values to draw conclusions based on the survey results.

Overall, according to the research, consumers in Finland are aware of environmental matters when they are buying products and services. Most of them are also, at least sometimes, actively searching for environmentally friendly alternatives when shopping, but only a few of them are willing to pay a noticeably higher price for eco-friendly products. When it comes to the environmental actions and goals of the companies whose services the consumers use or whose products they buy, consumers are not considerably aware of them. However, most consumers still expect companies to take environmental concerns into account in their strategic planning and think it gives a positive picture of the company. Thus, in general consumers find noting the environmental aspect of business important and demand actions and transparency from companies regarding it.

KEYWORDS: sustainability, environmental sustainability, corporate governance, environmental performance

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TIIVISTELMÄ:

Ympäristötietoisuus on kasvanut ympäri maailman. Äärimmäiset sääolosuhteet ja myrskyt ovat yhä enenevissä määrin osa arkipäivää aiheuttaen sekasortoa, nälänhätää ja terveysongelmia. Tämän vuoksi ympäristökestävyys korostuu myös yritystoiminnassa. Yritysten on tärkeää ryhtyä toimiin minimoidakseen toimintansa ympäristövaikutukset ja samalla varmistaa elinkelpoinen planeetta myös tuleville sukupolville. Ympäristöstä ja planeetasta huolehtiminen on myös tärkeää yrityksille, sillä samalla ne myös suojelevat omaa toimintaympäristöään. Ympäristöasioiden huomioiminen voi hyödyttää yrityksiä myös taloudellisesti, sillä sen avulla voidaan parantaa asiakkaiden ja muiden sidosryhmien tyytyväisyyttä yrityksen toimintaan, sekä erilaiset kestävät toimintatavat ja -mallit, kuten uusiutuvan energian käyttäminen, kierrättäminen ja uudelleenkäyttäminen ovat avainasemassa yrityksen kustannuksia karsittaessa. Strategisella suunnitelulla ja oikeilla johtamismenetelmillä on tärkeä merkitys, jotta yritykset voivat onnistuneesti ottaa käyttöön erilaisia menetelmiä ja toimintatapoja ympäristövaikutusten minimoimiseksi.

Tämän tutkimuksen avulla pyritään muodostamaan yleisellä tasolla ymmärrys kestävyydestä yritystoiminnasta, mistä se koostuu ja corporate governancen roolista ympäristöasioiden huomioimisessa. Tutkimuksen empiirisen tutkimuksen avulla pyritään selvittämään suomalaisten kuluttajien näkemyksiä siitä, onko ympäristöasioiden huomioiminen omiaan luomaan arvoa yritykselle ja sen sidosryhmille, sekä kuinka kuluttajat näkevät ja kehittäisivät yritysten corporate governancea ympäristöasioihin liittyen. Kvantitatiivinen tutkimus suoritettiin kyselyllä, jossa vastaajat vastasivat erilaisiin monivalintakysymyksiin. Kyselyn tulokset analysoidaan ja esitetään erilaisten kuvaajien ja numeeristen arvojen avulla, jotta niiden pohjalta voidaan tehdä johtopäätöksiä.

Tutkimuksen mukaan suomalaiset kuluttajat ovat melko hyvin tietoisia ympäristöasioista. Useimmat heistä myös ainakin satunnaisesti etsivät ja valitsevat ympäristöystävällisiä vaihtoehtoja niille tuotteille, joita yleensä ostavat. Kuitenkin vain pieni osa kuluttajista on valmis maksamaan huomattavasti enemmän ympäristöystävällisistä tuotteista tai palveluista. Kuluttajat eivät myöskään ole kovin kiinnostuneita ja paneutuneita käyttämiensä yritysten ympäristötekoihin ja -tavoitteisiin, mutta ovat vahvasti kuitenkin sitä mieltä, että erillisen ympäristöstrategian ja tavoitteiden olemassaolo on tärkeää. Yleisesti ottaen ympäristöasioiden huomioiminen nähdään positiivisena asiana. Kuluttajat kokevat siis ympäristöasioiden huomioimisen yleisesti tärkeänä ja odottavat tähän liittyviä toimenpiteitä ja päätöksenteon läpinäkyvyyttä myös yrityksiltä.

AVAINSANAT: kestävyys, ympäristökestävyys, corporate governance, ympäristötehokkuus

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1 Introduction

Due to increasing competition and pressure from consumers and societies, sustainability has become a more and more important part of companies' operations. Companies must consider the future generations and work to ensure a viable planet for them, too, in order to stay in operation and make profit. Customers often expect companies to meet their requirements and, in a world where environmental concerns have become one of the most challenging issues for humankind, companies are expected to meet environment-related requirements as well. In the present day, it can be impossible for companies to carry out their original purpose – yielding profits to their owners – if sustainable decisions that benefit the business are not made.

1.1 Background of the Study

In recent years, awareness of environmental issues has increased in the world. Research has unveiled the consequences of climate change and pollution and extreme weather conditions, ecological collapses, and health issues from pollution can already be seen in the world. Extreme hotness and dryness and excess flooding and rain affect food security by decreasing the productivity of agriculture and causing other disruptions in food supply chain (Esham et al., 2018, p. 1017). In some places lack of food and pollution alone and together can cause severe health problems like cardiovascular sicknesses and increase both child and adult mortality (Kroeger & Reeves, 2023, p. 521). Therefore, people across the globe demand actions from companies to consider the environmental effects of their operations.

Companies have to balance between the laws and regulations, customer requirements and running a profitable business. Taking the environmental aspect of business into account might require work and come with cost, but it is important to understand especially the long-term benefits that improving the environmental performance of a company has. If companies do not obey regulations or keep on unsustainable way of doing business, it will end up with more cost than the improvements and obeying regulations would have cost. Sanctions and a bad reputation among consumers can lead to a decrease in sales and in the worst case getting out of business. Thus, environmental concerns should not be ignored.

1.2 Research Gap

While a lot of research has been made on business sustainability and improving environmental sustainability of business operations, there has been relatively little research where the main focus has been on the consumer point of view (Hanss & Böhm, 2020, p. 3). Especially in Finland, there has not been studies that would have focused on consumer knowledge on business-related environmental matters. It can be useful to examine how consumers view environmental sustainability of business and how companies can improve their operations and governance of environmental matters to satisfy especially customer expectations since strategies and environmental disclosures are usually public and therefore aware customers might focus on these, too. Also, consumers' will to trade-off or prioritize other features like quality and cost over improved environmental sustainability has not been studied that much.

1.3 Research Description, Objectives and Research Questions

This thesis aims to form a comprehensive understanding on environmental sustainability and on different ways that companies can pursue it. The focus will also be on the corporate governance of environmental sustainability and the ways companies can improve it and bring it forward in their day-to-day operations. These themes will be covered in general based on existing literature and research. The objective of the empirical part of this study is to find out and understand how consumers in Finland see environmental sustainability aspect of business, what kind of value it creates to them, and how they see and would possibly improve the corporate governance of environmental sustainability.

The empirical part of the research is carried out as a mixed-method Microsoft Forms questionnaire that is distributed in different channels to reach as many respondents as possible. The results are presented with the help of different graphs and statistical values created and calculated in Microsoft Excel.

The two main research questions this research is searching answers for are as follows:

1. Does taking environmental sustainability into account create additional value to companies' stakeholders based on the opinions of Finnish consumers?

2. How could companies improve their corporate governance of environmental sustainability?

The goal is to find and interpret connections as well as differences between existing literature and research and the findings of the empirical part of this study. In the empirical part the focus will be on the consumers' views and even though the second research question is about corporate governance, it will be answered from the consumer perspective to get an understanding on how aware of corporate governance and environmental sustainability consumers are and how companies should take consumers' opinions and views into account when governing environmental sustainability.

1.4 Structure of the Research

The structure of the thesis is divided into the theoretical part, also referred to as the literature review, and the empirical part. After the introduction sustainability is discussed in general in the literature review and furthermore the emphasis is on environmental sustainability. In addition to general information about sustainability and its environmental dimension, the ways companies can contribute to improving their environmental sustainability and the additional value created by environmental sustainability is discussed in the second chapter. The third chapter considers corporate governance and especially how environmental matters are governed in companies. The purpose of environmental strategies and environmental disclosures as well as the effect they have, are covered in addition to environmental performance and measuring it. After the literature review the theory is concluded in theory conclusion, before the empirical part starting in the fourth chapter of the thesis.

First in chapter four, the data collecting method, a quantitative questionnaire, and the reasons of choosing this research method are explained in detail. Also, chapter four includes a description of data analysis methods as well as information on assessing the validity and reliability of the research. The research results are presented with graphs and descriptions in the fourth chapter and theory from literature review. The results are and managerial implications are discussed in chapter five. The research results and the findings are concluded, and the research questions answered in chapter six.

2 Literature Review

2.1 Environmental Sustainability

Sustainability has several varying definitions. According to Friedman (2020, p. 1) it is usually defined as fulfilling and meeting the current needs while also ensuring the life and well-being of future generations. He also described how sustainability in business, so-called corporate sustainability, often seemed to have three dimensions: environment, social, and economic sustainability. Thus, in a nutshell, business sustainability means that ethical factors, such as transparent governance, financially sustainable decisions and environmental effects should be evaluated all together when making business decisions.

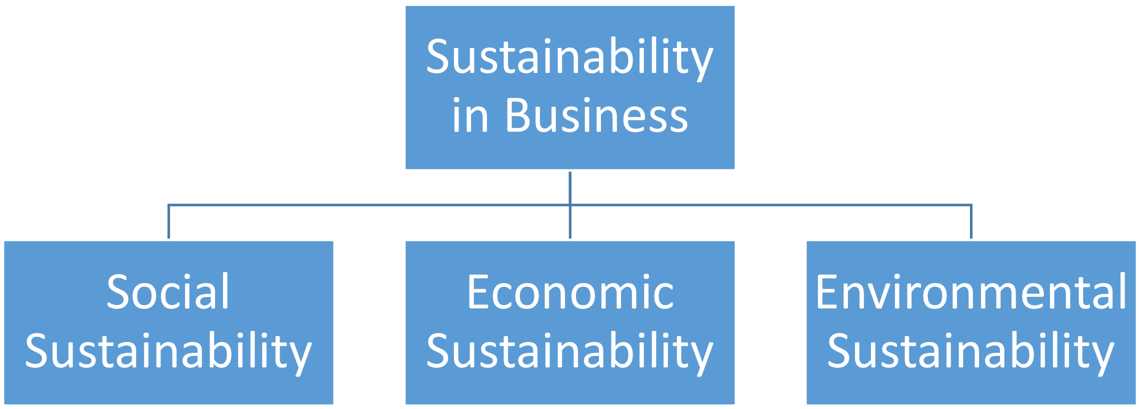

Figure 1. Building Blocks of Sustainability.

The environmental aspect of sustainability has become the most important strategic issue of the current era that calls for business growth with the environmental impact in mind (Gabler et al., 2017, pp. 262–263). Thus, growth and profit are aimed for since financial sustainability is vital for any company to survive the increasing competition and unexpected events affecting the business. However, due to the public pressure and evaluation they must be earned by implementing practices that will ensure a viable planet Earth for the future generations. According to Marcon et al. (2017, p. 83) companies should bear in mind the social and environmental aspects of sustainable business since they are apt to contributing towards financially sustainable performance, too. Some of the most common ways of contributing to environmental sustainability in business will be discussed next.

2.1.1 Building Blocks of Environmental Sustainability in Companies

Companies must take action to improve the environmental sustainability of their operations. The scale of the actions usually depends on the size of the company. Streimikiene et al. (2016, p. 22–23) mention that usually the size of the company can appear as a disadvantage when it comes to decision making related to environmental issues. The larger the company is, the slower and more bureaucratic the decision-making processes are, whereas smaller organizations are often more flexible. Flexibility is a great competitive advantage that smaller companies have compared to larger ones since they can better react to constantly changing conditions and the steps needed to implement decisions in action can be taken faster (Streimikiene et al., 2016, p. 22).

Regardless of the size, industry or location of a company, there are several actions they can take in order to improve environmental sustainability. Some examples of sustainable practices that can be adapted to the day-to-day operations of a company are among others recycling, employee training and education, resource reduction and taking sustainability into account when designing products and processes (Streimikiene et al., 2016, p. 23). Carbon offsetting is also a way of improving environmental sustainability in addition to traditional energy and material process changes. In conclusion, the aim is to minimize literal waste and the emissions caused by the operations of the company and also to preserve scarce resources. Carbon offsetting, employee training and sustainable product and process design will be discussed more in depth next.

2.1.2 Carbon Offsetting

According to Zhang et al. (2019, p. 715) carbon offsetting can be divided into voluntary carbon offsetting (VCO) and compliance carbon offsetting. They explain that compliance carbon offsetting means that the companies are required by governmental or international organizations to compensate emissions in the compliance carbon markets. Therefore, it works as an incentive for companies to reduce their emissions. VCO refers to a complementary carbon emission compensation via carbon credit trade in the carbon market and this is an additional way of compensating carbon emissions. Funds collected by selling carbon credits are used in different projects that mitigate carbon emissions.

Companies, especially in the transportation industry, are increasingly offering their customers an option for voluntary carbon offsetting (Zhang et al., 2019, p. 716–717). Usually, customers like airline passengers can compensate their part of the carbon emissions of their flight or other service by paying extra on their purchase, or nowadays it is also possible to use frequent flyer points to complete this transaction. Even though more and more companies are offering carbon offsetting opportunities to their customers, the adoption level is still rather low due to lack of creditability and transparency (Zhang et al., 2019, p. 717). It is likely that the customers cannot form a coherent picture on how the carbon offsetting really works and what they achieve with that. Therefore, it is important to ensure open communication about VCO programs and ensure that only accredited and certified partners are used.

2.1.3 Employee Training and Education

Human resource management has an important role when it comes to training employees and guiding them towards more sustainable ways of working, as well as raising their environmental awareness. By taking these actions into account, the employees’ commitment to new environmental sustainability related actions can be ensured and therefore the succession and quality of the outcome increased as well (Liu et al., 2014, p. 196). This is necessary if the environmental sustainability within an organization is wanted to be enhanced.

If the employees of a company are not aware of the environmental influence of their work nor their personal choices, their commitment to cross-organizational environmentally sustainable practices can be significantly low (Pham et al., 2020, p. 1). It could be useful to offer the employees general information about the environmental effect of the company's operations as well as demonstrate how together with the employees the company can decrease their environmental impact. Even though most environmental decisions are made by the top management, all employees have an important role in carrying out and executing the decisions.

Also, the change every worker can make in their daily job should not be ignored. The employees could be encouraged to careful and high-quality performance in order to reduce waste and possible returns as well as to save scarce resources such as materials and energy. Even gradual changes in individual employee electricity and water usage can have a great effect in a large organization. Thus, employees should also be encouraged to think about the environmental effect of their behavior on breaks and when lounging in company facilities.

Training and encouraging might not always make employees that committed to or engaged with sustainable-oriented activities. Especially ground-level employees who are not part of the long-term strategic planning and goal setting are likely to express different attitude towards sustainable actions than the management. Merriman et al. (2016, pp. 821–822) suggest that financial incentives might not always be enough to make employees engaged since goals of new initiatives and the performance measures might not be communicated clearly. They also discuss how employees can view environmental goals as part of many objectives they can pursue in their work. Therefore, it would be beneficial to combine environmental goals with other objectives and make them complementary. For example, demonstrating to employees how sustainable practices can improve financial performance and thus support achieving these objectives, can increase employee commitment to sustainable goals, too (Merriman et al., 2016, p. 822).

2.1.4 Sustainable Product and Process Design

Product and process design are very immensely efficient ways to pursue environmental sustainability in a company. Watz and Hallstedt (2022, pp. 1–2) state in their research that to ensure the environmental sustainability, the life cycle impacts of the product and its life-cycle activities such as production, distribution, repair, and support as well as end-of-life processes, must be carefully designed already in the early stage of the innovation process. They also discuss that it is demanding to balance between sustainable practices and other requirements regarding for instance cost and performance. In some cases, improving the environmental sustainability of operations can cause extra costs and lower performance. It is also noticeable that implementing sustainable design methods does not automatically improve sustainability.

To ensure the best possible results in terms of sustainability and other traditional product requirements, cooperation with the stakeholders is important (Villamil et al., 2021, p. 1043). When all the stakeholders are involved, it is more likely that the methods and improvements discussed in the designing phase are implemented adequately in practice. Also, working together with knowledge and point of views from different departments of a company, its partners, contractors, and the end-users of the product can advance the innovation process significantly. Also, all the stakeholders and supply chain members are also likely to be more committed to operating more in a sustainable way and implementing new methods when they have been part of the process from the initial steps.

Villamil et al. (2021, pp. 1043–1044) also bring up the importance of strategic planning when it comes to improving sustainability of product development and process design. Thus, the improvements and advantages should be aimed at while bearing in mind the long-term goals. If a company actually wants to pursue environmental sustainability and improve sustainability in the course of time, the actions taken must be designed in a way that the short and long-term goals and expectations are being met. If the strategic approach to sustainable product and process design is missing, it can turn out that effort and capital has been used in developing methods and products that will not have a future (Villamil et al., 2021, p. 1044).

Implementing circular economy practices and theories to company's processes can help companies to reduce their environmental impact. Moving from a linear process and product and material flow view to a circular approach is a key to more sustainable business processes (Korhonen et al., 2018, p. 37; Bong et al., 2022, p. 1). The focus should be paid on reusing products and materials as long as possible instead of continuously extracting new resources, according to the European Parliament (2015). In circular economy the focus is also on the sustainable supply chain design, where the environmental concerns are taken into account throughout the supply chain and the product life-cycle. Implementing circular economy practices would also help companies to gain competitive advantage and create additional value, because recycling and reusing would reduce their dependency on others in terms of raw materials and other resources. Therefore, the sourcing costs are also likely to decrease.

Figure 2. Circular Economy Model (The European Parliament, 2015).

Overall, it is important to be able to monitor and evaluate the impact new solutions and techniques have had. Life-cycle assessment is an example of a tool that can be used to help to estimate the environmental impact of a product in all stages of its life cycle. However, some disadvantages of life-cycle assessment that Villamil et al. (2021, pp. 1044–1045) mention are its strong quantitative approach and that the assessment can be made later in the product development process. It would also be important to have a strategic and qualitative measures that can help to assess the sustainability of the product life cycle already in an early stage Thus, a method that has the strategic and qualitative approach can be used (Villamil et al., 2021, p. 1045). This sustainable or strategic life-cycle assessment involves identifying sustainability hotspots throughout the product life cycle and these hotspots can later be studied more in depth when quantitative data has been collected more.

2.1.5 Environmental Sustainability as a Value Driver

Streimikiene et al. (2016, pp. 19–21) state that value of a company is a dependent on both short and long-term performance and therefore when making decisions and creating and maintaining value, it is important to pay attention to the short and long-term effects. The measure of value is in the end the value that is created to the shareholders, but to be able to create value to them, value needs to be created to all the company's stakeholders, such as customers, employees, investors, and suppliers. From a customer point of view, value means the gain from the purchase - of all the benefits, including economic and social benefits, that the customer receives by buying a product or service (Streimikiene et al., 2016, pp. 21–23).

The operations of a company must be legitimate, socially accepted and overall, on a sustainable basis in order to the business to be profitable in the long run and to ensure the perpetuity of the company. Some decisions, such as ignoring environmental regulations due to their cost and complexity, might save cost in the beginning, but all the consequences like fines, business restrictions, compensations and reputational damage will usually become more costly when observing the long-term effects of the decision. Therefore, it is important to ensure that short-term decisions and actions at least do not weaken the value and profitability of the company in the long term.

Naturally, it would be ideal that in the long run the value and profitability would increase. As Streimkiene et al. (2016, p. 19) mention, environmental sustainability is rather unexplored but yet to be playing an important role as a value driver. By taking environmental sustainability into account companies can obtain competitive advantage, for example by improving their customer and stakeholder satisfaction, risk mitigation, and achieving better overall economic performance. Overall, when the business is flourishing, the value of the company and consequently the value of shareholder possessions increase.

2.1.6 Customer and Stakeholder Satisfaction – Increased Sales and Revenues

Today, companies face growing pressure from governments and markets to implement practices that help to conserve the environment (Gabler et al., 2017, p. 262). Consumers are aware of environmental matters and expect the companies whose products and services they use to also share the same values. It is vital for companies to understand the connection between environmental sustainability, customer satisfaction and profit. Customer satisfaction is often described as the fulfillment of customer's expectations or as an indicator that describes whether positive customer judgement towards company's services or products has been attained or not (Streimikiene et al., 2016, p. 24).

When customers find environmental matters important and the company meets the customer expectations in terms of sustainable operations or products, customer satisfaction increases. Satisfied customers are likely to return to the company and a good reputation can spread and speed up sales and increase profit. Thus, paying attention to customer satisfaction and increasing it can be beneficial for the company and today taking environmental questions into account is likely to increase satisfaction. When customer satisfaction and loyalty increase, it is likely to increase the market share of the company as well (García-Dastugue & Eroglu, 2019, p. 70). In addition, some customers might also be willing to pay more for a product or a service whose manufacturer has taken environmental sustainability into account.

It is also important that other stakeholders, for instance cooperation partners and subcontractors, are satisfied with the company. Some companies might even require their partners or suppliers to operate in an environmentally sustainable way to maintain their own customer satisfaction and reputation. Also, it is important that all the subcontractors and partners obey the laws and regulations in question to avoid any consequences to them. In addition, companies that consider sustainability at all its levels are likely to stay in business in the future despite increasing competition and requirements and this makes them appealing and trustworthy partners or contractors.

2.1.7 New Innovations and Solutions – Cost and Time Savings

Companies can benefit from pursuing environmental sustainability by implementing new green innovations and solutions in practice. Zhuo (2022, p. 2) explains that green innovation is a term used for new or improved products or services that aims to reduce its environmental impact. The improvements can be made to the product design, production process or management practices. Investing in and taking environmentally friendly and sustainable green innovations and solutions into use can be a key to savings in cost and time, as well as make it easier for companies to face forced changes in the future (Ekins & Zenghelis, 2021, p. 955). For instance, usage of some environmentally friendly alternatives for materials and energy can be decided by companies today, but at some point, in the future it might be required that certain portion of specific material must be made of renewable or recycled resources. It is easier for companies to implement new practices at their own pace now rather than forcing rapid changes. Changes are also likely to be less expensive when made gradually while adapting to new practices.

Some examples of sustainable innovations and practices that can help companies reduce costs and increase efficiency are simplified packaging solutions and usage of recycled materials. Also, implementing more energy efficient machinery and lighting, like LED lights, can significantly reduce energy consumption and LED is also likely to produce a better luminosity. Montoya et al. (2017, p. 56) mention that LED lights can last up to 25 times longer than halogens or incandescent light bulbs. On the other hand, LED lights do not produce that much heat and might lead to the need for extra heating for the facilities when the waste heat does not exist. Having its own power plant might also be beneficial for certain companies in the long run. Even though the cost of for example solar panels can be relatively high, the investment, like any other investment that helps to pursue efficiency, will eventually pay off.

Overall, reducing energy consumption and materials usage as well as using recycled materials will help companies to save costs and increase the profitability of its operations (Hermundsdottir & Aspelund, 2021, p. 4). Nevertheless, simplifying production processes can help companies to decrease lead time and therefore lead to significant time savings. In the future, when new sustainable innovations and solutions become more and more popular, they will also become more affordable to access for companies. Research conducted by Hermundsdottir and Aspelund (2021, pp. 9–10) demonstrates that implementing sustainable innovations are apt to contribute to value creation, reduce cost and improve the overall competitiveness and performance of a company.

2.1.8 Quality and Performance Improvements

Implementing sustainable practices in the operations of companies can benefit both the stakeholders, like customers, and the company itself. Thus, taking environmental concerns into account can contribute to quality improvement, since environmentally sustainable actions often aim to waste reduction and efficient use of resources. It is important to maintain consistent and adequate quality of the outputs, since every time a product must be discarded due to quality issues, it wastes resources and causes excess emissions due to the recycling or disposing of the item and might cause supply shortages and affect the customer satisfaction. This is especially concerning if the items are made-to-order or made-to-assembly. Overall, part of quality management consist of meeting customer expectations and today more and more consumers are likely to expect that environmental concerns are taken into account when producing the goods and services they use (Mirsha & Napier, 2015, pp. 2–3). If customer expectations are not met, the quality of the product or service is not adequate and needs to be improved to satisfy customers and to ensure profitability.

2.2 Corporate Governance of Environmental Sustainability

In this chapter, the corporate governance of sustainability is discussed. Present day, companies face a raising challenge when they need to assess the adequate measures to respond to global environmental concerns and the increasing requirements of customers, other stakeholders, and governments. The focus will be on environmental matters and how they are approached and announced in companies. Different environmental outcomes that are results of corporate governance decisions like environmental strategies and strategic decisions, performance goals and measures and well as environmental disclosures are studied more in depth.

2.2.1 Corporate Governance in General

Corporate governance refers to the control and directing system and methods that are used in companies to manage the business and direct it to the wanted direction (Garner, 2017, p. 1054). This includes different rules and regulations set by governments and other organizations, but also internal processes and practices that are followed in a company. Even though companies must obey the law, corporate governance is uniquely implemented in every company and formed by individual actions and practices. Corporate governance is generally a tool to establish direction for the business and is the basis for all operations and activities between the stakeholders and other parties, like community.

There are several aspects when it comes to corporate governance. Overall, corporate governance is the life-time management process of a company. According to Dandapani and Shahrokhi (2022, p. 1120) it consists of building trust with stakeholders and the network, ensuring compliance and adapting regulations to daily operations, managing risks, governing disruptions, and improving the mechanisms by which the company is governed. Corporate governance defines the goals and vision and also the means and measures how the organization is managed and guided towards the set goals. Hence, corporate governance affects all dimensions of doing business. Below, figure 2 concludes the corporate governance factors into a corporate governance cycle map.

Figure 3. Corporate Governance Structure (Adapted from Dandapani & Shahrokhi, 2022, p. 1120).

2.2.2 Environmental Approach to Corporate Governance

Corporate governance and proper management are in a key position when implementing sustainable practices and aiming to achieve goals related to environmental sustainability in company's operations (Dandapani & Shahrokhi, 2022, p. 1118). As environmental changes are both locally and globally affecting life on different dimensions, the importance of governing environmental issues in companies, governments and other organizations has become increasingly important (Aguilera et al., 2021, p. 1469). Without aligning company's points of interest with the ones of company's stakeholders like customers and contractors, it would be difficult to do profitable business.

Overall, if a company wants to become more sustainable and improve the environmental sustainability of its operations, governing the corporate environmental sustainability is essential. Krechovská and Procházková (2014, pp. 1145–1146) describe that corporate governance pursues sustainability by creating different models of managing the change towards more sustainable operations. Developing a distinct strategy that establish the basis for environmentally sustainable values is important, so that the environmentally friendly and sustainable business decisions are based on principle decisions and are mentioned in a company's disclosures.

If a company is wanted to be guided towards more sustainable operations, the governing bodies of the company must also follow the sustainable practices and make environmentally, socially, and economically sustainable decisions (Krechovská & Procházková 2014, pp. 1149–1150). To success in improving the sustainability of a company, it is necessary that all the activities from the top management to the floor-level manufacturing are aware of and share the same values and implement sustainable practices. It is also important for a company's reputation that environmental sustainability is taken into account coherently on different levels of the company. The outcomes of governing environmental sustainability in a company are discussed in the following chapter.

2.2.3 Environmental Sustainability Governance Outcomes

When corporate governance has an environmentally sustainable approach, there are different outcomes that can help the company to improve the sustainability of its operations, increase stakeholder trust and social acceptance and to monitor the process and ensure the compliance of its actions. Companies can develop different strategies that take into account the environmental concerns to ensure that the sustainability goals are known and aimed for. Environmental disclosures are also important, because they provide information to stakeholders and other third-party parties on business decisions. Public disclosures about environmental actions are likely to improve the reputation of the company and analyzing company's environmental performance and reporting results are part of building trust and ensuring that everything goes according to regulations and goals.

Thus, corporate governance can be seen to have an internal and external dimension. Internally, strategies are developed, and sustainable practices implemented. The performance and development are also measured, and the results are used to analyze and further improve processes. Internal reporting is also important so that everyone in the organization is kept on track about progress. External dimensions of corporate governance include adapting to the regulations and laws, cooperating, and communicating with stakeholders and public to ensure transparency and social acceptance. There is also reporting that can be required by the authorities. Next, some outcomes, such as environmental strategy, disclosures, and performance measuring, will be discussed more in depth.

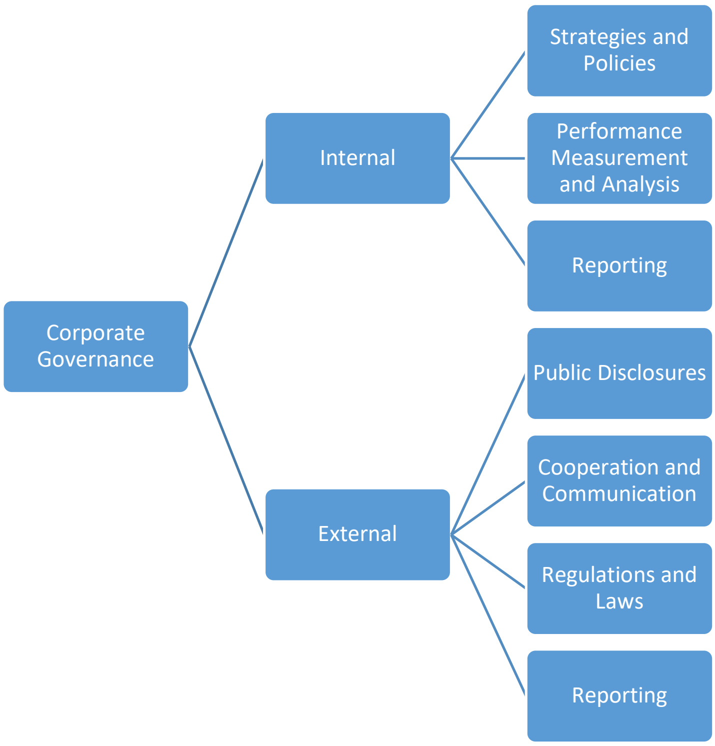

Figure 4. Dimensions of Corporate Governance of Environmental Matters

2.2.3.1 Environmental Strategy and Policies

Latan et al. (2018, p. 299) describe environmental strategy as a defined group of initiatives that aim to decrease the effect that company's operations have on the environment. Environmental strategy can consist of plans for more sustainable product and process design, materials usage, energy consumption and waste management. Companies can for instance align that they reduce the use of fossil energy and implement reuse and recycling methods at their facilities. Thus, environmental strategy is a long-term direction and intention for managing environmental sustainability of company's operations (Aragon-Correa & Mandojana, 2016, p. 1). Without an environmental strategy it would be difficult to improve company's environmental performance because a strategy makes it clear for the organization that what is wanted to achieve, by what means the goals are achieved and how the achievements will affect the company and the environment. Thus, as study conducted by Latan et al. (2018, p. 303) demonstrated, environmental strategies positively affect companies' environmental performance.

Investing and implementing sustainable practices is not simple nor always cheap, therefore it is important that the planning has a long-term strategic approach and that the people within the organization are committed to the actions. Also, changes do not happen overnight, but it can take years or decades for significant and noticeable changes to happen in the environment. Nevertheless, the return-on-investment increases when time passes. For a raw example, if a company invests in solar panels and pay for the panels and their installation $50,000.00 and after necessary maintenance and other expenses this leads to $10,000.00 annual savings in energy cost, it takes five years before the company starts to financially benefit from the investment.

2.2.3.2 Environmental Disclosures

Today, as environmental and other sustainability related matters are increasingly topical, companies are informative about their sustainability efforts and results. Also, these disclosures are gaining growing attention because companies' stakeholders are often aware of sustainability concerns (Lagasio & Cucari, 2019, p. 701). Environmental disclosures are part of pursuing corporate responsibility and increasing stakeholder and public trust for the company and its operations and decision making. Hence, it is important that the disclosures are as accurate and understandable as possible, in order to avoid misunderstandings and feeling that the environmental actions and words are not aligned.

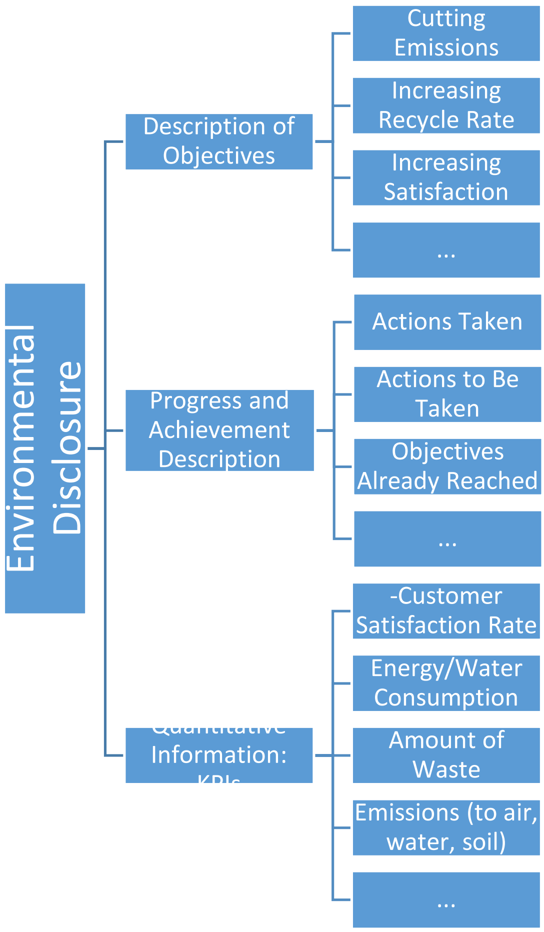

Figure 5. Example of Environmental Disclosure Structure.

Overall, as Solikhah and Maulina (2021, p. 2) mention, environmental disclosures are ways of contributing to media coverage and to raise the knowledge about a company. Environmental disclosures are also a way to gain and increase the legitimacy of business decisions and operations. By communicating about the goals and achievements of a company, the company is apt to achieve public acceptance to its objectives and therefore it also supports the company's survival in the unsteady environment. Also, according to stakeholder theory, a company is dependent on the support of its stakeholders, such as customers, employees, suppliers, and owners (Solikhah & Maulina, 2021, p. 4). Communication and openness are therefore important means to gain acceptance and support. Villiers and Dimes (2020, p. 12) explain that disclosures are overall a great way for companies to differentiate themselves from their competitors.

Even though disclosures are usually seen as a corporate governance outcome that is targeted to external stakeholders and parties, environmental disclosures play an important role within the company, too (Villiers & Dimes, 2020, p. 10). Especially in large organizations the environmental objectives and accomplishments are not that visible for all employees and thus disclosures are a way of distributing information internally as well. Companies must have the support and acceptance of the majority of their employees, too, because commitment and knowledge are key contributors to operation efficiency, quality, and operations improvements. In conclusion, different disclosures are important ways of building a company’s competitive advantages.

2.2.3.3 Environmental Performance Assessment

When companies implement environmental practices, it is also important to assess and evaluate the effectiveness of the actions. Different key performance indicators (KPIs) can be used to measure cost, material, and energy savings as well as improved productivity. It is important to frequently analyze the results and casual connections and based on the indicators and analysis make decisions on possible changes and improvements to the environmental actions implemented in the operations. Therefore, assessing environmental performance is important for a company to be able to improve its activities, to allocate resources and to track changes.

Also, the stakeholders of a company, especially investors, are likely to be interested in knowing the current status of the environmental performance in a company. Hence, companies might include this information in different reports and disclosures to further improve the legitimacy and transparency of their business practices. Whereas environmental sustainability contributing activities and achievements are described in environmental disclosures, it is good to include quantitative data, KPIs, to better demonstrate the process and to provide tangible evidence.

The KPIs used to evaluate environmental performance can vary a lot and measure different features and they are necessary to provide quantitative values for the environmental performance. Also, the environmental goals should also be defined at least with some numerical values, so that it is easier to detect whether objectives have been reached or not. However, Gebhardt et al. (2022, pp. 1 – 3) bring up the importance of sufficient targets. They explain that if the objectives are set too low, the actions taken and measuring the KPIs do not benefit the organization, because the progress has not been adequate with respect to the importance of environmental sustainability in business. Also, it is important that the objectives are set at a level at which they would actually create additional value and lead to gaining a competitive advantage in the long run.

2.3 Literature Review Summary

Currently, environmental sustainability is a strategic issue for business growth. While profitability is the main objective for companies, it should not come at the cost of environmental degradation. Companies must adopt practices that ensure a habitable planet for future generations, too. As companies aim to operate in a financially sustainable way, they must bear in mind that social and environmental aspects of sustainable business contribute to financial sustainability. There are various ways in which companies can improve the environmental sustainability of their operations. Companies can adopt sustainable practices like recycling, reducing the usage of resources, and employee training to help them minimize waste and emissions and preserve scarce resources.

Carbon offsetting is another way of improving environmental sustainability. It can be divided into voluntary and compliance carbon offsetting. However, the adoption level of voluntary carbon offsetting is still low due to lack of credibility and transparency. Human resource management has an important role in training employees and raising their environmental awareness to ensure their commitment to new environmental sustainability-related actions. Encouraging and incentivizing employees can also increase their engagement and commitment to sustainable goals. Also, product and process design can be very efficient ways to pursue environmental sustainability in a company, but balancing sustainable practices with other requirements like cost and performance can be challenging. Overall, adopting sustainable practices is crucial for companies to improve their environmental performance.

Environmental sustainability can be seen as a value driver in companies. Creating value for shareholders and increasing the value of the company requires creating value for all stakeholders, including customers, employees, investors, and suppliers. Environmental sustainability is becoming increasingly important, as customers and markets are pressuring companies to implement practices that reduce the impact on the environment. Implementing environmentally sustainable practices can provide competitive advantage, increase customer satisfaction, and improve overall economic performance.

Investing in green innovations and solutions can help companies save costs and increase efficiency. For example, implementing more energy-efficient machinery and using recycled materials can significantly reduce energy consumption and waste. Sustainable practices like these can increase customer satisfaction and loyalty, as customers increasingly value companies that share their values. It is essential to consider both the short and long-term effects of decisions to ensure the competitiveness and profitability of the company while creating value for all stakeholders. To ensure consistent and functional implementation of environmental practices, environmental sustainability must be taken into consideration in corporate governance activities, too.

Corporate governance is essential for companies to establish direction and it is also the basis for all operations and activities between stakeholders and other parties a company interacts with. Environmental sustainability is a crucial aspect of corporate governance in today's world, as environmental changes are affecting life in different dimensions. To fully implement sustainable practices and achieve goals related to environmental sustainability, proper management and corporate governance are necessary. Without aligning company interests with the points of interest of stakeholders like customers, partners, and government, it would be difficult to do profitable business.

In conclusion, incorporating environmental sustainability into corporate governance is critical for the company's survival, public acceptance, and contribution to the environmental sustainability improvement. Companies must prioritize the development of environmental strategies, implement sustainable practices, and assess their environmental performance to ensure compliance with regulations, gain stakeholder trust and social acceptance, and build a competitive advantage. Improving environmental sustainability requires a holistic approach and involvement of all the stakeholders. It can be time consuming and implementing sustainable practices comes with a cost, but in the long run companies are also likely to benefit from this change and create additional value and increase their own value.

There has, however, been only a little research on consumers' views on environmental sustainability where their thoughts about governing environmental sustainability and value creation regarding it would have been studied. Thus, the following empirical part of this research focuses on the opinions and habits of Finnish consumers. It can be useful to organizations to be aware of how consumers see and value different sustainable actions and also take the consumer point of view into account when governing environmental sustainability. Understanding the consumers' preferences and values can significantly help companies to operate in a certain region and increase their stakeholder satisfaction and sales when focusing on the right matters that the consumers value the most.

3 Research Methodology

In this chapter the empirical approach to the research questions and the data collection method, process and outcomes will be discussed. The tools and methods used in data collection and analysis will be discussed in detail and possible challenges and reliability and validity issues are analyzed as well.

3.1 Research Method

The empirical research part of the thesis was carried out as a quantitative survey. The questionnaire was constructed in Microsoft Forms, and consisted of 23 questions, including eight background questions. The background questions are used in data analysis to study how different attributes, such as gender, age, living environment and occupation affect respondents' opinions and views. The actual questions in the survey handle topics regarding environmental sustainability, consumers' eco-friendly choices and the consumers' views on how companies should govern environmental matters in their operations. All the questions in the questionnaire were multiple choice questions where respondents could choose the alternative that is best aligned with their opinion. In most questions there was a statement, and the respondent were asked to choose a value from 1 to 5 based on how well they agree with the statement. Number one means that the respondent totally disagrees and number five that the respondent totally agrees with the statement. A few questions had different answer choices from which the respondents could choose the best alternative.

A questionnaire or a survey was chosen as the research method because it is assumed that answers are easier to get to a simple survey rather than for example to a long and complex interview. Also, when as many respondents as possible are wanted and preferably from different areas, different age groups and educational backgrounds, it is most efficient to reach out to them on social media, since it is widely used nowadays. The questionnaire was answered anonymously, except for four background questions about age, living environment, educational background and career position were asked in order to analyze the results better and find connections for example between education or living environment and certain points of view. A quantitative survey was carried out because the answers are straight-forward, and it is more convenient to draw conclusions based on the answers to quantitative survey. Also, as the number of respondents was estimated to be rather large, it would have been harder to process qualitative data in large volumes.

3.2 Data Collection

The survey created in Microsoft Forms was distributed on in February 2023 on different social media platforms, including LinkedIn, Facebook, and Instagram. The answers were collected for one month. The survey was distributed in different Facebook and LinkedIn groups that have members throughout Finland, to ensure that the respondents would represent the whole population as accurately as possible. Consumers in this research are thought of as people who earn and use their own money. Therefore, for instance infants or small children who are indirect consumers through their parents or guardians, were not targeted in this research. The instructions and the questions in the survey were both in Finnish and English because the respondents were not wanted to be limited to only Finnish-speaking consumers, but the native language of respondents was not asked in the survey to avoid conflicts or misunderstandings. The respondents did not want to be segregated or stigmatized based on their native language, because it might be a sensitive thing for some people.

The size of the population (N), consumers in Finland, is not exactly known, because number of citizens does not equal to the number of consumers, since not all citizens are necessarily active consumers and immigrants, foreign students and other foreign people living or staying in Finland can be seen as consumers in Finland. Thus, the optimal sample size (n) was calculated by using a formula:

$$Necessary\ Sample\ Size = \frac{(Zscore)^2 \cdot StdDev\ \cdot (1 - StdDev)}{(Margin\ of\ Error)^2}$$

The confidence level was chosen to be 90 % which comes with a Z-score of 1.645. A higher confidence level was not chosen because the greater the sample size, the more likely the sample represents the whole population and in this research the sample size is estimated to be relatively small. Because the sample size is not known, according to Smith's (n.d., p. 2) suggestion a standard deviation of 0.5 was used in the formula. The necessary sample size was calculated then to be approximately 68, but the goal set for this research was set a little higher, to 70 respondents. Overall, 76 respondents answered the survey, so the necessary sample size was exceeded by eight respondents. Together the survey was shared on seven social media platforms, in four Facebook groups, two LinkedIn groups and on Instagram.

The margin of error (MOE) was calculated by using the formula below. Again, as the population is extremely large and therefore unknown, population proportion of 0.5 was used based on Smith's (n.d., p. 2) suggestion. The margin of error of the research is 9.46. Thus, the actual population values will be within approximately nine and half per cent from the survey results.

$$MOE = \sqrt{\frac{Population\ Proportion \cdot (1 - Population\ Proportion)}{Sample\ Size} * Zscore}$$

3.3 Data Analysis Methods

As Saunders et al. (2007, p. 407) states, quantitative data is not interpretable if it is not processed. Thus, the data collected in the survey are analyzed with the help of different graphs and descriptive statistics. Microsoft Excel is used to build charts and graphs based on the data and SPSS Statistic is used to calculate descriptive statistical values. First, the frequencies and distribution of the respondents' background question answers are studied and presented with graphs and numbers to gain an understanding of the sample body. Then the actual survey questions and their answers are studied regarding the background variables that would best describe and affect the answers to each certain question.

Not very actual survey question is analyzed based on each background variable. Especially those cases, where certain answers are clearly dependent on a certain background variable are described and presented more in detail. For instance, if the education background of the respondents clearly correlates with certain opinions, these are studied more in depth. The questions where the answers are independent of background variables are viewed with a general approach and not presented or examined by each background variable.

3.4 Validity and Reliability

Heale and Twycross (2015, p. 66) define validity as how accurately the study results describe what they are desired to be measuring and reliability as the consistency of the method. Hence, a study is valid if the results accurately measure what the researcher intended them to measure and reliable if similar results can be gotten if the study was to be repeated under similar conditions. These are both significantly important features of research because if the research lacks validity or reliability, conclusions cannot be drawn based on it and the results are not trustworthy.

The current validity and reliability of this study and its findings are sound. The questions in the questionnaire were formed as clear and simple as possible, so that misunderstandings would not occur. The sample size was also adequate and based on tested calculations and therefore the sample size contributes to accuracy of the results. It is also reasonable to assume that respondents have answered the survey honestly, because no incentives or other benefits were offered to the people answering the survey. However, as the topic of the study – environmental sustainability and consumer habits – are evolving and the world faces global crisis, the results might vary in possible future studies. This, though, does not affect the reliability of this study since the conditions would not be the same as they were when this research was carried out. This study was targeted to all consumers in Finland, but if the same survey was distributed only in urban or rural areas or amongst respondents with a specific education, the answers might vary from this general approach.

4 Results

4.1 Background Questions

Next, the eight background questions asked in the survey are analyzed to get a better understanding of the sample body. All 76 respondents answered each question, so the total number of answers for each question is 76. The eight background questions and the answer choices were as follows:

1. Age of the Respondent
2. Gender of the Respondent
3. Living Environment
4. Education
5. Occupation
6. Years of Work Experience
7. Choose the Terms You Can Define (five options)
8. Knowledge on Environmental Matters (on range from one to ten)

4.1.1.1 Age of the Respondents

Out of the 76 respondents nine are under 20 years old, 25 are between the age of 20 and 29, 14 respondents are between the age of 30 and 39, nine are between 40 and 50, 11 are in the age group of 50 to 59 years old and eight respondents are over 60 years old. Hence, approximately 75 % of the respondents are under 50 years old. The age group of 20 to 29 years old got the most responses and age group of 30 to 39 years old second most responses. Therefore, it can be concluded that young adults represent the majority of the respondents.

This age distribution is likely due to the fact that the survey was distributed on social media where the users tend to be younger. However, as social media is increasingly popular among elderly people, too. Young people are also often more aware of environmental matters and want to make their voices heard. This is likely to explain why the majority of the respondents are less than 50 years old.

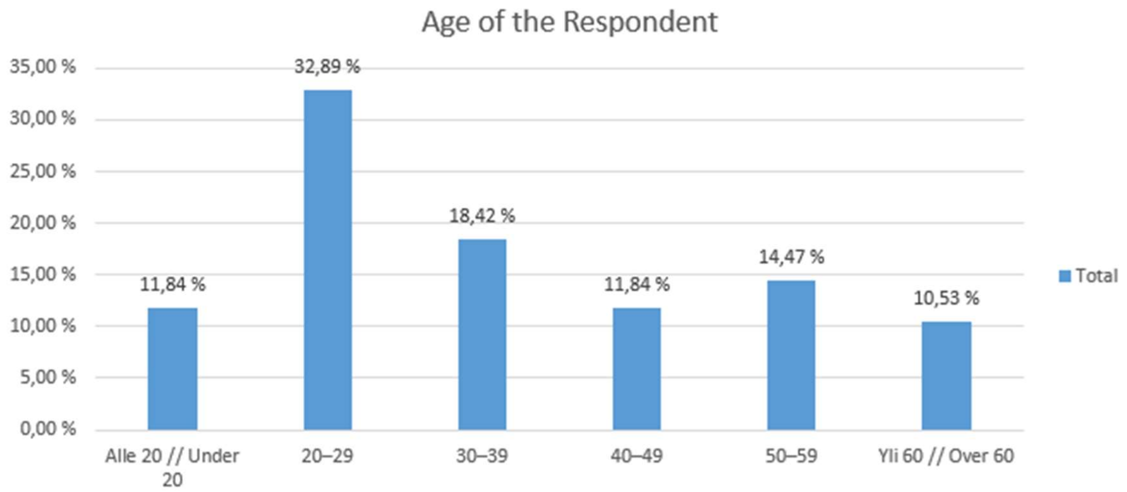

Figure 6. Distribution of Answers to the Age of the Respondents.

4.1.2 Gender of the Respondents

Most of the respondents are women. Up to 49 out of the 76 respondents identified themselves as women and the rest 27 of them identified as men. This means that almost 65 % of the respondents are women and approximately 35 % men. A raw assumption could be made that women are more interested in and aware of the environmental concerns and therefore most of the respondents identify themselves as females.

4.1.3 Living Environment

In this question the respondents had three choices and needed to choose the one that best describes their current living environment. The options were city center, population center or other urban area, and countryside. The majority of the respondents live either in a city center (24 answers) or in a population center or other urban area (31 answers). In the countryside live 21 of the respondents.

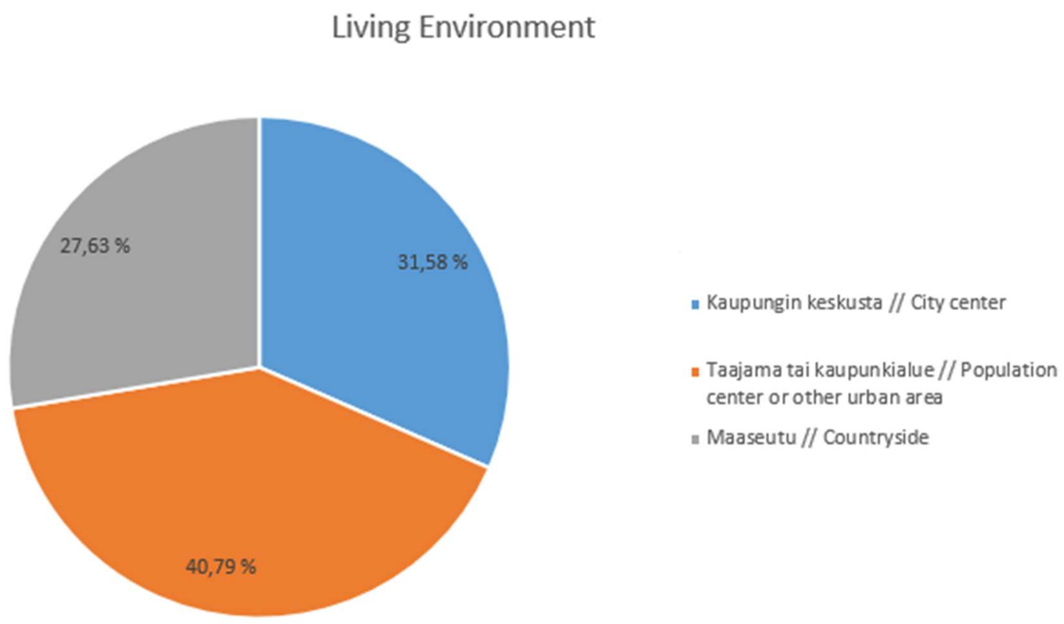

Figure 7. Living Environment Distribution of the Respondents.

4.1.4 Educational Background

The fourth background question asked about the educational background of the respondents, and they were asked to choose the highest degree they have completed. The choices were basic education, vocational qualification, high school diploma, bachelor's degree, master's degree, and postgraduate degree. The number of respondents with each education level can be seen in the table below.

Highest Completed Degree	Number of Respondents
Alempi korkeakoulututkinto // Bachelor's degree	20
Ammatillinen koulutus // Vocational degree	12
Lukio ja/tai ylioppilastutkinto // High School Diploma and/or Matriculation Examination	22
Peruskoulu // Basic education	9
Ylempi korkeakoulututkinto // Master's degree	13
Grand Total	**76**

Table 1. Number of Respondents with a Certain Education.

The distribution of the educational background of the respondents is almost normally distributed according to the bar chart below, but it is little skewed left. In the graph the higher degrees are on the right side of the graph. Therefore, the graph shows that most of the respondents, approximately 72 % had at least a high school degree or higher education. It is possible that people with higher education have more opinions on global concerns, such as environmental matters, and therefore they have been more interested in answering the survey.

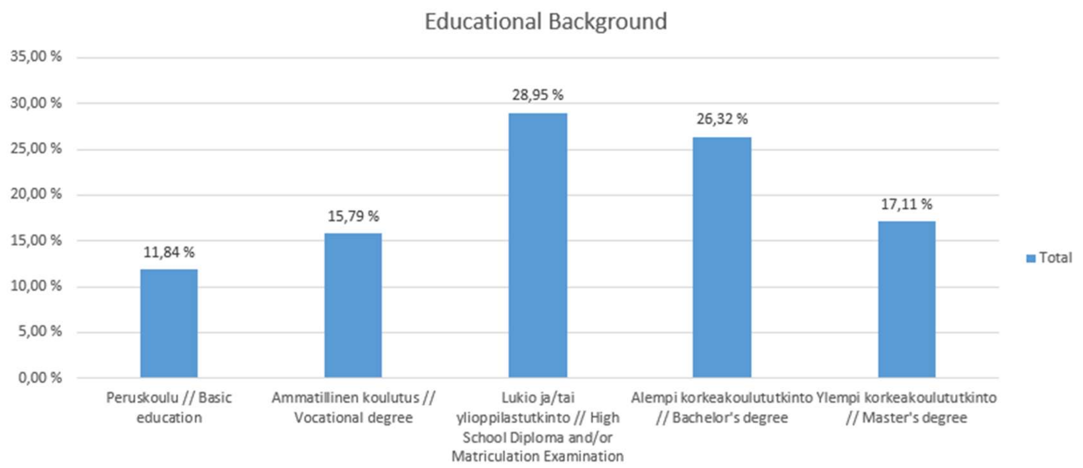

Figure 8. Distribution of the Educational Background of the Respondents.

4.1.5 Occupation

In the fifth background question the respondents had to choose an option which described their current occupation. The choices were student, worker, employee, specialist, management, entrepreneur and unemployed. Most respondents, almost 32 %, are students (24 responses) or workers (19 responses, 25 % of all responses). Eight of the respondents are employees and eight of them work at a management level. Ten respondents work as specialists. Only six of the respondents are unemployed and only one of them is an entrepreneur. Therefore, it would not be reliable to draw conclusions about all entrepreneurs' opinions based on only wan respondent, so the answer will be treated as an answer of a management-level respondent.

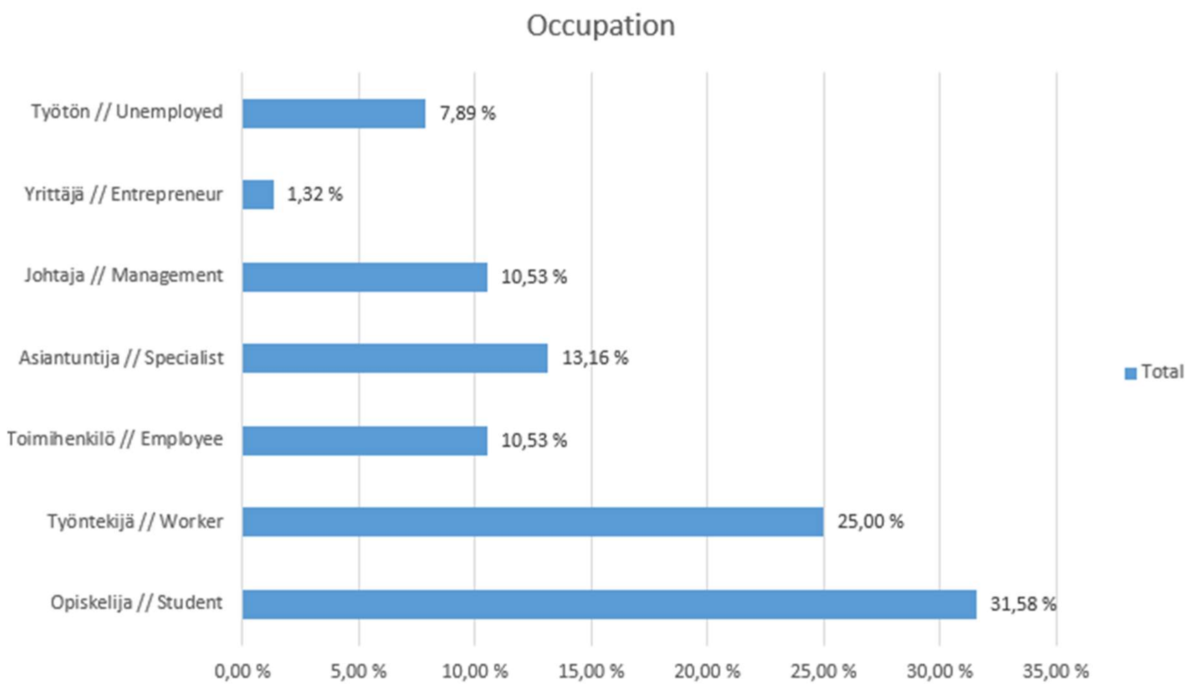

Figure 9. Occupation of the Respondents.

4.1.6 Years of Work Experience

Years of work experience was the sixth background question in the survey. The respondents had five options that can be seen with associated number of responses are presented in the table below.

Years of Work Experience	Number of Responses
11–15 vuotta // 11–15	7
1–5 vuotta // 1–5 years	25
6–10 vuotta // 6–10 years	13
Alle vuosi // Less than a year	8
Yli 15 vuotta // Over 15 years	23
Grand Total	**76**

Table 2. Count of Years of Work Experience.

Over 70 % of the respondents had either under five years or over 15 years of work experience. Approximately ten per cent of the respondents had from 11 to 15 years of work experience and approximately 17 % between 6 and 10 years of work experience. Thus, the distribution of work experience in years is not even. The percentages of grand total of each work experience classification are presented in the following pie chart.

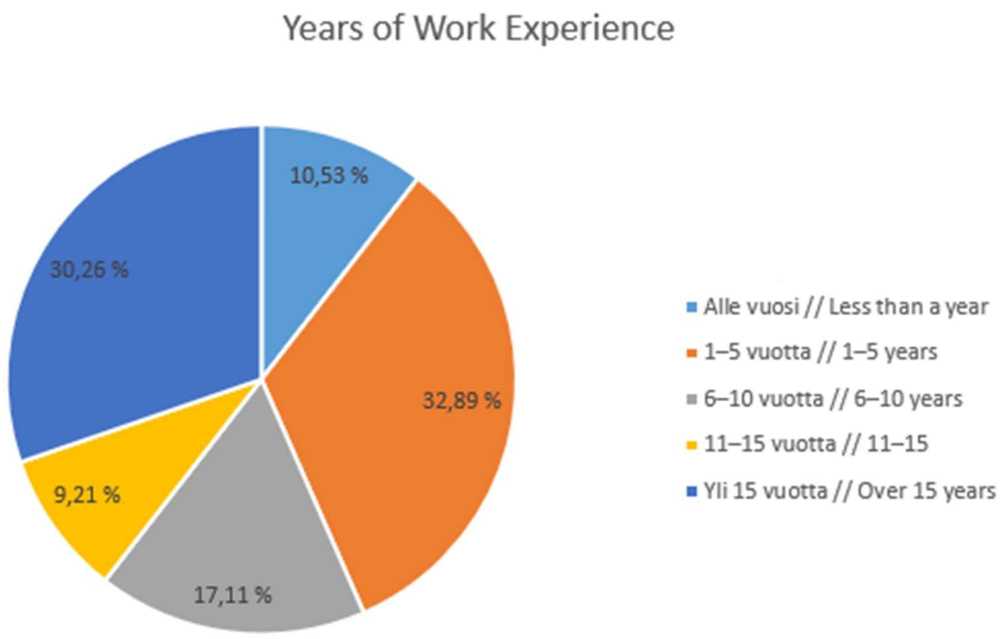

Figure 10. Distribution of Responses to Years of Work Experience.

4.1.7 Terms that the Respondents Can Define

The seventh background question studied how well the respondents think they can define some key terms related to environmental sustainability. The respondents had to choose all the terms from a list that they think they can define. The terms were environmental sustainability, circular economy, carbon offsetting, greenwashing and renewable. Most of the respondents, 74 of them, could define the term "renewable". Two other terms that the majority of the respondents could define were "environmental sustainability" (55 responses) and "circular economy" (58 responses). The hardest ones to define for the respondents were "greenwashing" and "carbon offsetting". Only 39 could define greenwashing and 36 could define carbon offsetting.

Row Labels	Sum of Number of Respondents Who Can Define
Environmental Sustainability	55
Circular Economy	58
Carbon Offsetting	36
Greenwashing	39
Renewable	74
Grand Total	**262**

Table 3. Terms the Respondents Can Define.

4.1.8 Knowledge Level on Environmental Matters

The last background question asked the respondents what level of environmental knowledge they evaluate that they possess on a scale from one to ten, where one means no knowledge at all and ten means perfect knowledge. Below can be seen the number of responses per knowledge level. Overall, it appears that most respondents think they have rather average or above average knowledge. There are, however, no responses for options one or two which indicates that all the responses possess some level of knowledge on environmental matters. Also, no one answered ten which means that no respondent has excellent knowledge on the topic either. The average of the responses is about 6.9 and the median and the mode is 7.

Knowledge Level	Number of Responses
1	0
2	0
3	2
4	3
5	7
6	15
7	22
8	17
9	10
10	0
Grand Total	**76**

Table 4. Knowledge on Environmental Matters Count.

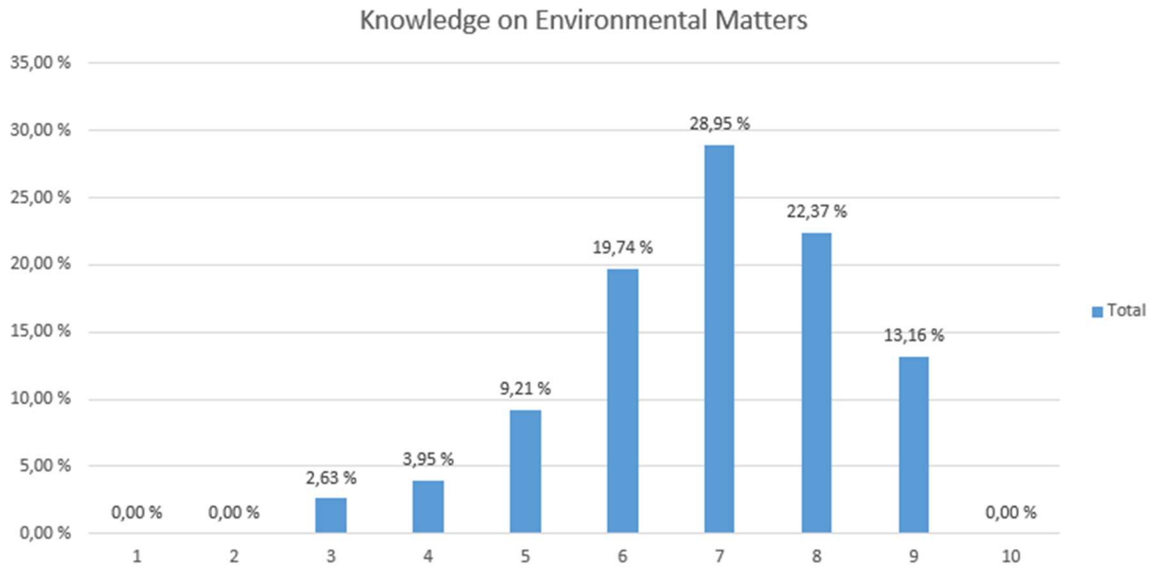

Figure 11. Knowledge on Environmental Matters in Percentage of Grand Total.

4.2 Actual Research Questions

In this chapter, the responses to the actual research questions of the survey, questions numbered from nine to twenty-five in the Microsoft Forms survey, will be presented and analyzed. Most questions were to be answered on a scale from 1 to 5 based on how much the respondents agreed with the statement stated in each question, where one means that the respondent totally disagrees, three means that the respondents does not agree nor disagree, and number five means that the respondent totally agrees with the statement.

First, the distribution of responses is studied for each question/statement on a general level. To find out whether each actual research question is independent or dependent on a certain background question variable, the Cramér's V value for background variables age, gender, living environment, educational background, and occupation will be calculated. Then, based on which background variable has the greatest Cramér's V value, its distribution of answers for the specific question/statement will be analyzed more in detail. According to Allen (2017, p. 289) Cramér's V is a value between 0 and 1 that is used to measure and describe the possible association between nominal variables. The closer to 1 the Cramér's V value is, the stronger is the association between the variables. Cramér's V is used in this research because all the variables can be categorized as nominal variables and there are at least two possible unique values in each variable.

4.2.1 Searching for Environmentally Friendly Alternatives

First actual question in the survey, question number ten in the Microsoft Forms survey stated a statement "When buying products or services, I actively search for environmentally friendly alternatives." Overall, it can be seen from the bar chart that the majority (43.24 %) of the respondents somewhat agree with the statement or totally agree (6.58 %) with it. Hence, over half of the respondents at least sometimes look for environmentally friendly alternatives for regular products. On other hand a little more than one fourth (26.32 %) of the respondents somewhat disagree and approximately five per cent totally disagrees with the statement. Almost one fifth of the respondents did not have an opinion to one way or another (18.42 %).

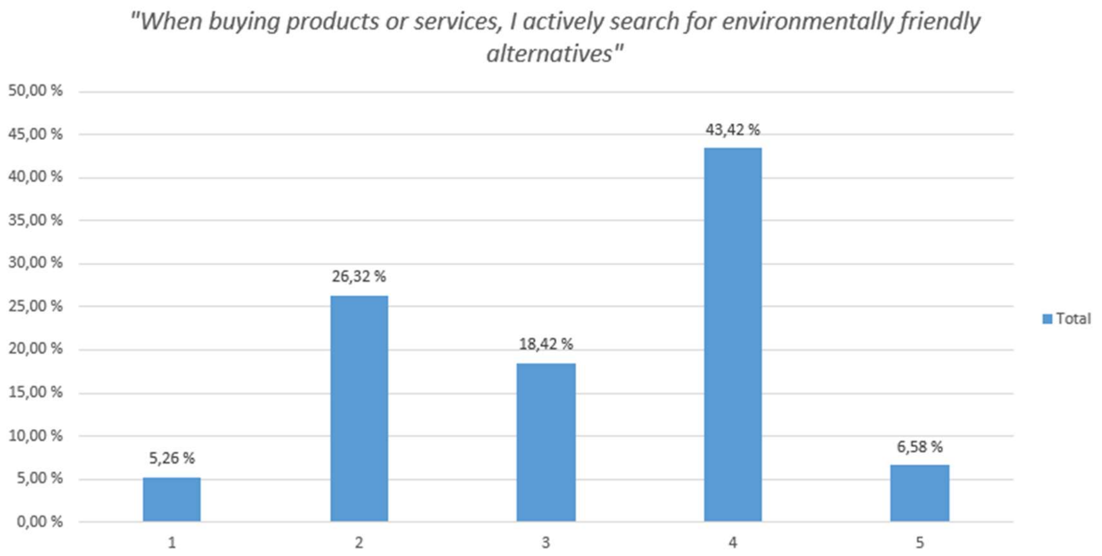

Figure 12. Distribution of Responses to "When buying products or services, I actively search for environmentally friendly alternatives."

To find out whether the background variables affect the answers of the respondents, the following contingency coefficient values were calculated on SPSS Statistics software. As the table below displays, there is little association between each background variable and the answers, but the strongest association appears to be between gender and the answers to question nine.

Background Variable	**Cramér's V**
Age	0.224
Gender	0.330
Living Environment	0.234
Education	0.282
Occupation	0.286

Table 5. Cramér's V Values of Background Variables for "When buying products or services, I actively search for environmentally friendly alternatives."

As the clustered bar chart shows, the distribution of answers somewhat varies depending on the gender of the respondent. Over half of the women respondents (55.10 %) somewhat or totally agrees with the statement, whereas approximately 18 % of the female respondents did not have an opinion on the topic and little more than one fourth (26.53 %) somewhat disagrees with the statement. Thus, over 50 % of the female respondents are seeking eco-friendly alternatives when buying products or services. When it comes to male respondents, around 2/5 (40.74 %) of them somewhat or totally disagrees with the statement and 2/5 somewhat or totally agrees with the statement. Approximately one fifth of the male respondents did not have a strong opinion.

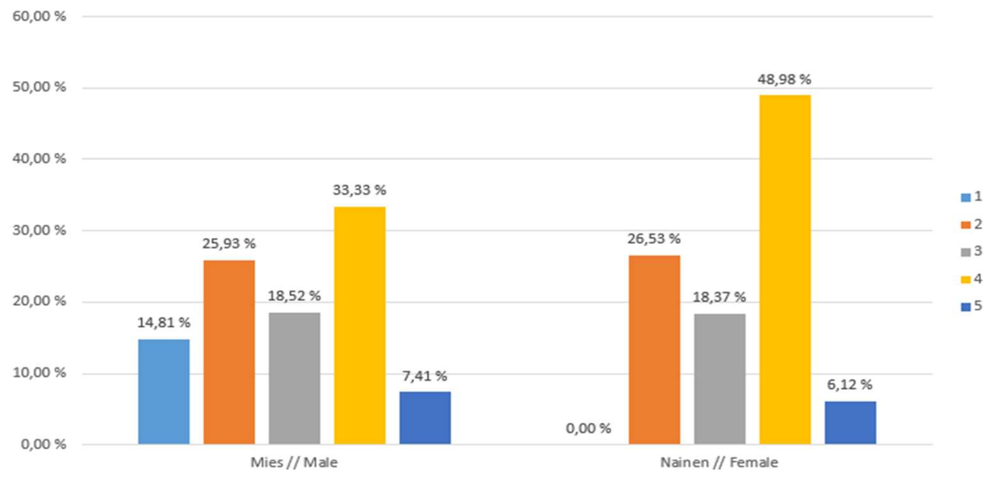

Figure 13. Distribution of Answers to "When buying products or services, I actively search for environmentally friendly alternatives" by Gender.

4.2.2 Choosing an Eco-friendly Alternative Despite Higher Price

Second actual question in the survey, question number ten in the Microsoft Forms survey, was a statement "I usually choose an eco-friendly product or service even though it would be more expensive than alternative products." When all the responses are viewed altogether, it appears that half of the respondents somewhat agree or totally agree with the statement, meaning that at least half of the respondents usually choose an eco-friendly alternative even though it would cost more than the original product. Approximately one fifth of the respondents (18.42 %) did not agree nor disagree with the statement and little more than 30 per cent of the respondents somewhat or totally disagree with the statement. Overall, the majority would buy an environmentally friendly product despite a higher cost, but there is still a significant number of respondents who would not.

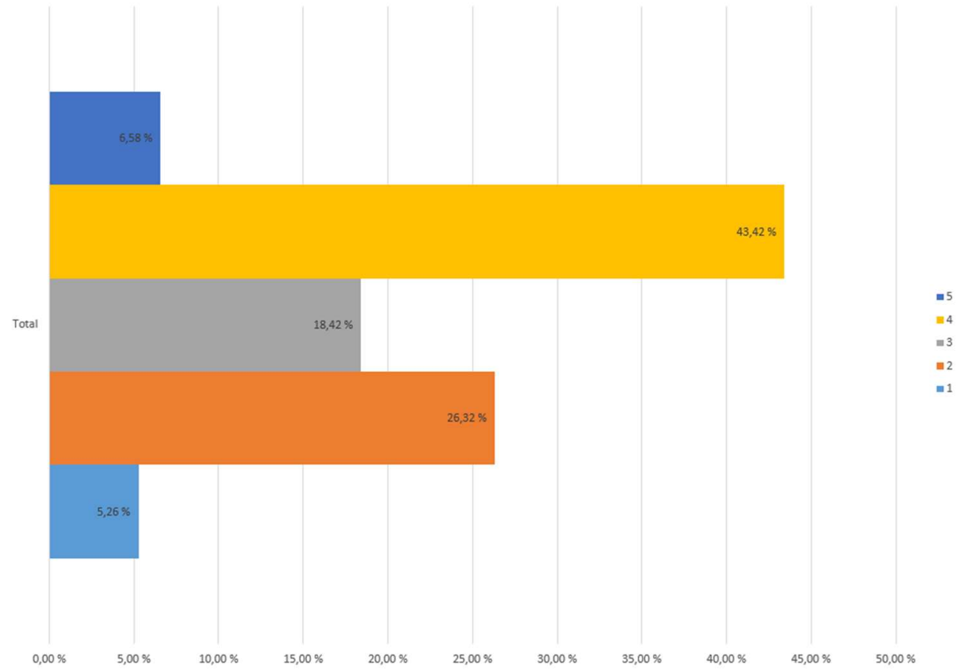

Figure 14. Distribution of All Responses to “I usually choose an eco-friendly product or service even though it would be more expensive than alternative products.”

The Cramér’s V values below show that the Cramér’s V values are rather small for each background variable. The association between living environment and question ten is weak and for the other background variables it is moderate since the values fall in between 0.20 and 0.40. The strongest association is again between gender and the answers for question ten.

Background Variable	Cramér’s V
Age	0.200
Gender	0.276
Living Environment	0.179
Education	0.258
Occupation	0.251

Table 6. Cramér’s V Values of Background Variables for “I usually choose an eco-friendly product or service even though it would be more expensive than alternative products.”

The graph below shows that out of female respondents about 30 % somewhat or totally agreed with the statement in question ten, approximately 25 % did not agree nor disagree and about 45 % somewhat or totally disagreed with the statement. When it comes to male respondents, about 37 % of them somewhat agree with the statement, but no one totally agreed with it. Approximately 7,5 % of male respondents did not have an opinion on the statement and roughly 45 % somewhat or totally disagreed with the statement, so they are not buying environmentally friendly products if they cost more than regular alternatives.

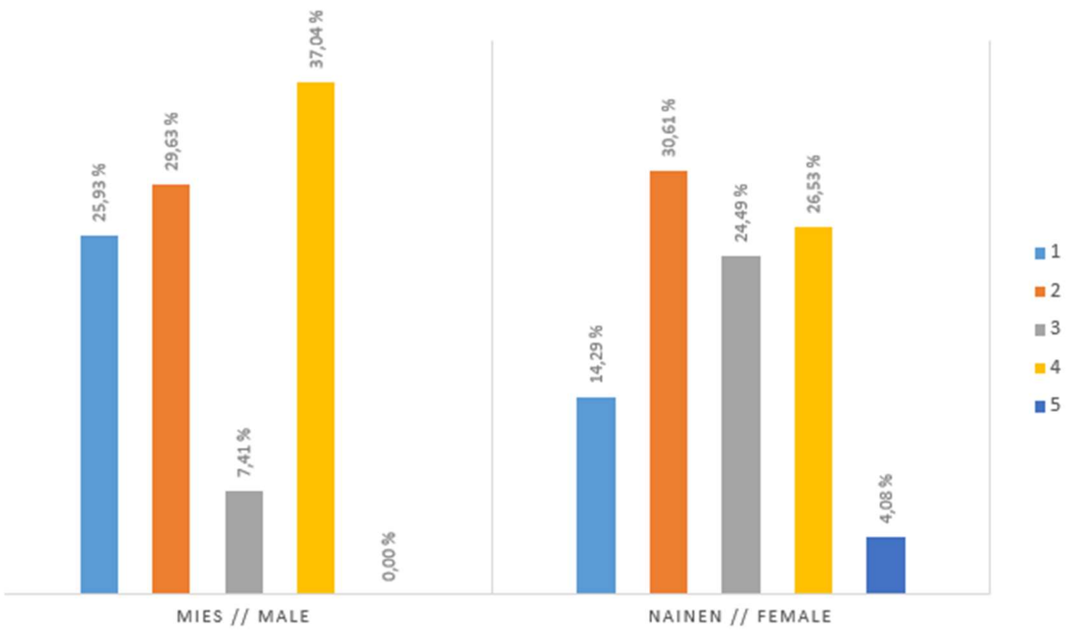

Figure 15. Distribution of Answers to “I usually choose an eco-friendly product or service even though it would be more expensive than alternative products” by Gender.

4.2.3 How Much More to Pay for an Eco-Friendly Product or Service

The question 11 was “How much more are you willing to pay for an eco-friendly product or service?” When all the responses are viewed together, it appears that almost half of the respondents (42.11 %) are willing to pay less than ten per cent more for an eco-friendly product or service. The same percentage of respondents are willing to pay between 11 and 25 % more. Only 10.53 % would be willing to pay one fourth to half more and a little greater percentage than five per cent are willing to pay over 51 % more for an eco-friendly product or service. Overall, the respondents are not willing to pay so much more for an environmentally friendly product or service, even though question 10 answers indicate that respondents are looking for eco-friendly alternatives.

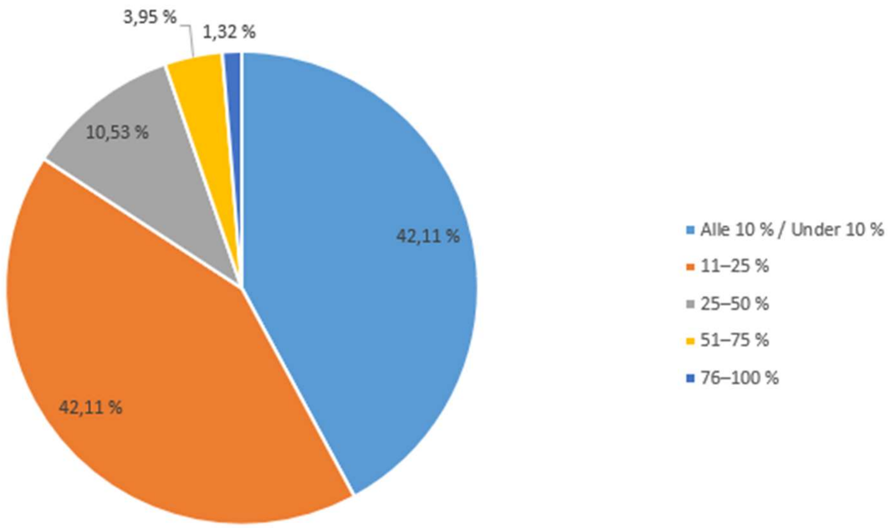

Figure 16. Distribution of All Responses to "How much more are you willing to pay for an eco-friendly product or service?"

The Cramér's V values in the table below indicate that there is moderate association between all the background variables and answers to question 11. The strongest association is between gender and the willingness to pay certain amount more for a sustainable product or service and the weakest association between occupation and the answers to the question.

Background Variable	Cramér's V
Age	0.312
Gender	0.316
Living Environment	0.265
Education	0.257
Occupation	0.238

Table 7 Cramér's V Values of Background Variables for "How much more are you willing to pay for an eco-friendly product or service?"

The bar charts below display the distribution of the answers to question ten for male respondents and female respondents. It is obvious that majority of both male (92.59 %) and female (79.59 %) respondents are only willing to pay less than 25 % more for an environmentally friendly product or service. Only 7.41 % of male respondents would be willing to pay from 25 % to 50 % more for an eco-friendly product, whereas the percentage for female respondents is 12.24 %. Approximately eight per cent of female respondents would be willing to more than 50 % more for an environmentally friendly product and service when no male respondent would be willing to pay more than 50 % more.

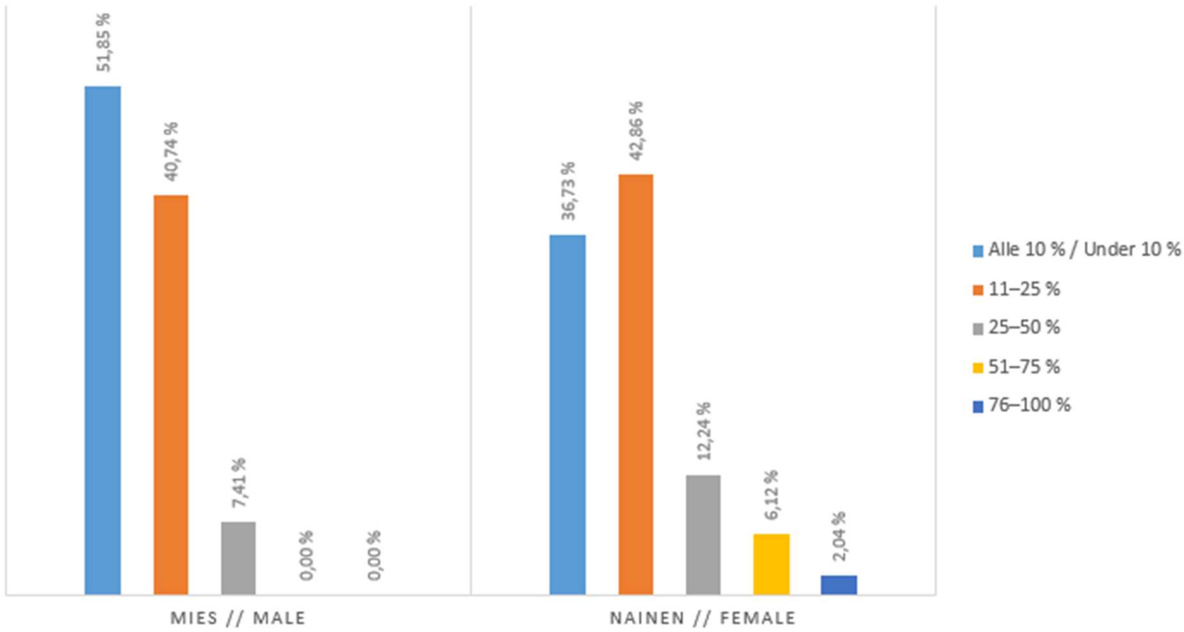

Figure 17. Distribution of Answers to **"**How much more are you willing to pay for an eco-friendly product or service?" by Gender.

4.2.4 Focus on Packaging Materials

The twelfth question included a statement "I focus on the packaging materials of products, e.g. their recyclability or usage of recycled or renewable materials." Over 40 %

somewhat agreed with the statement and little more than 17 % of the respondents totally agreed with the statement, meaning that over half of the respondents are at least sometimes paying attention to the packaging materials. Little less than one fifth (18.42 %) did not agree nor disagree and 19.74 % of the respondents somewhat disagree and 2.63 % totally disagree with the statement.

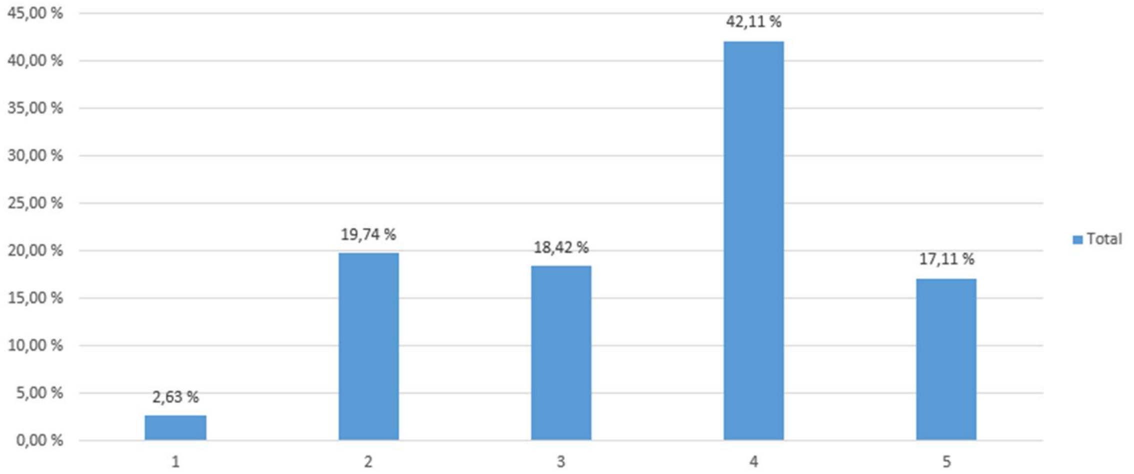

Figure 18. Distribution of All Responses to "I focus on the packaging materials of products, e.g. their recyclability or usage of recycled or renewable materials."

The Cramér's V values that are displayed in the following table suggest that there is again somewhat moderate association between each background variable and the answers to question 12. Also, gender and the answers have the strongest association in this question too, meaning that gender is likely to affect the answer of the respondent.

Background Variable	**Cramér's V**
Age	0.210
Gender	0.298
Living Environment	0.292
Education	0.205
Occupation	0.281

Table 8. Cramér's V Values of Background Variables for "I focus on the packaging materials of products, e.g. their recyclability or usage of recycled or renewable materials."

Since the dependence on the gender of the respondent is only moderate, there is not too big of a difference in the distributions of answers for each gender. It is visible, however, that female respondents tend to focus on the packaging material of a product more often than male respondents. Almost 65 % of female respondents somewhat or totally disagree with the statement, whereas only little more than 16 % somewhat disagree and no one totally disagrees with the statement. Almost half of the male respondents also somewhat or totally disagree with the statement, but over 30 % somewhat or totally disagree with it. The rest of the respondents do not have strong opinions.

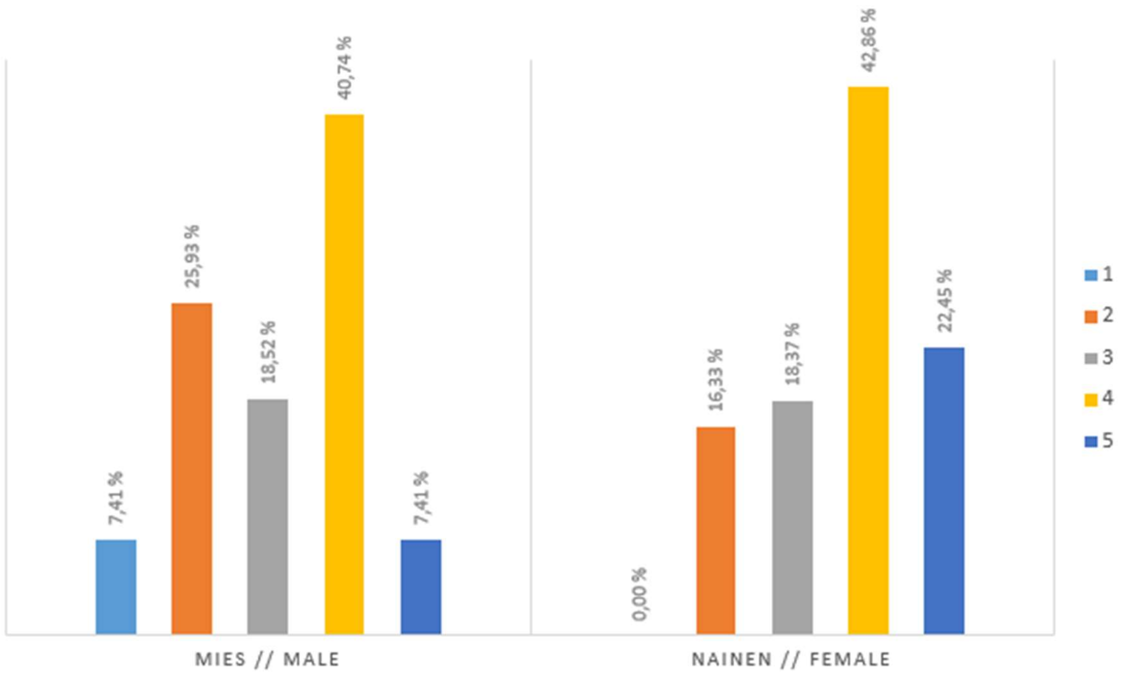

Figure 19. Distribution of Answers to "I focus on the packaging materials of products, e.g. their recyclability or usage of recycled or renewable materials" by Gender.

4.2.5 Preference for Companies Taking Environmental Sustainability into Account

In question 13 the respondents needed to answer whether they agree or disagree with the statement “I prefer companies who make sustainable choices and consider environmental questions.” The pie chart below represents the answers of all respondents together. The majority of all respondents, 63.16 % answered “yes” meaning that they prefer companies that operate in a sustainable way. 36.38 % of the respondents answered that they do not prefer companies based on their choices regarding sustainability or environment.

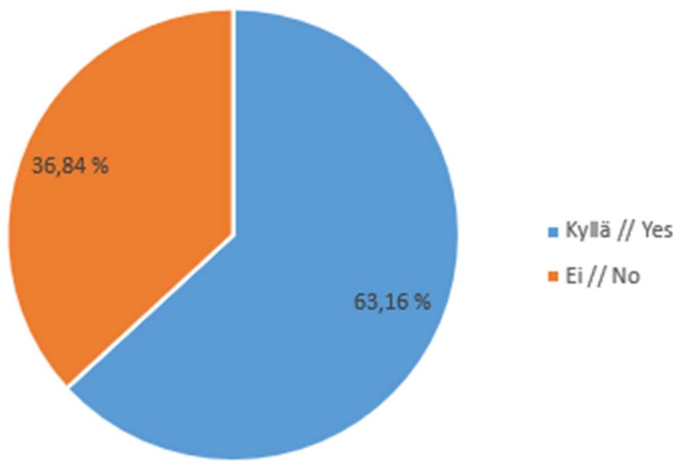

Figure 20. Distribution of All Responses to “I prefer companies who make sustainable choices and consider environmental questions.”

According to Cramér’s V values, there is only a weak association between living environment and the answer to question 13. Moderate association can be found between the answers to the question and gender and the occupation of the respondent. The association between the age and the education of the respondent and the question number 13 are almost relatively strong.

Background Variable	Cramér’s V
Age	0.384
Gender	0.231

Living Environment	0.113
Education	0.395
Occupation	0.296

Table 9. Cramér's V Values of Background Variables for "I prefer companies who make sustainable choices and consider environmental questions."

Whether the respondents answered "yes" or "no" to the question can be seen to be somewhat dependent on the education of the respondent. The majority of the respondents who had only completed basic education did not have any special preference for companies, whilst only 22.22 % of them answered that they prefer companies that make sustainable choices. When it comes to respondents with additional education in addition to basic education, most of them say that they prefer companies who make sustainable choices and take environmental concerns into account. The answers of respondents who have completed master's degree are almost tied, but a small majority say they do not have a preference, whilst 46.15 % of them said they had a preference.

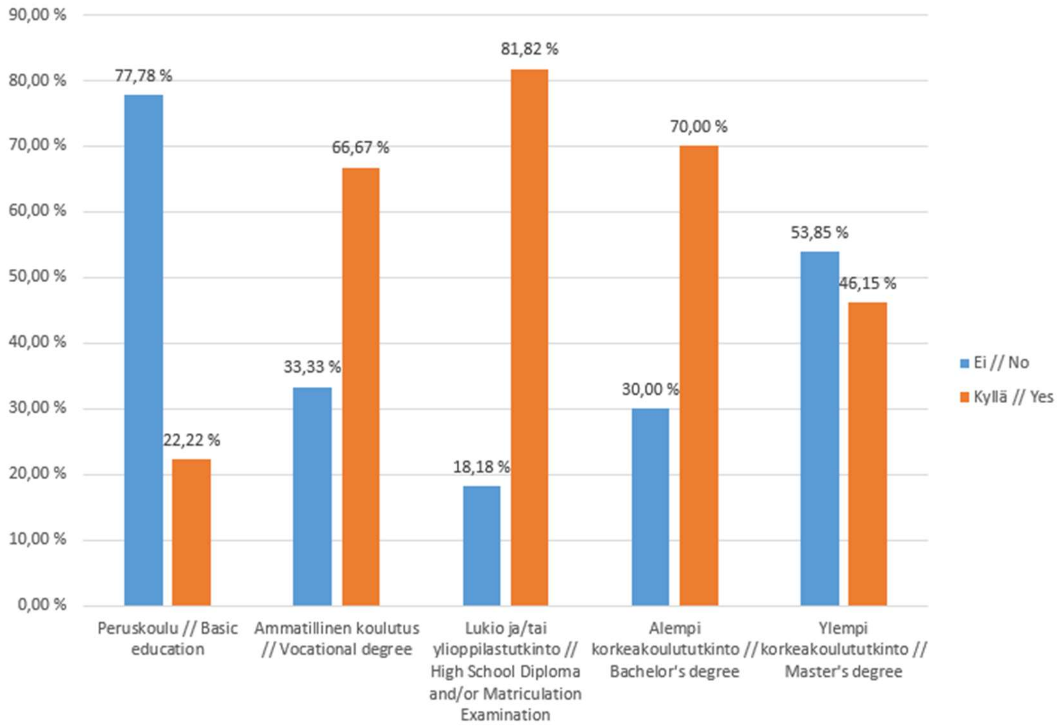

Figure 21. Distribution of Answers to “I prefer companies who make sustainable choices and consider environmental questions” by Education.

4.2.6 Personal Sustainable Transportation Preferences

In the question number 14, the respondents were asked to express whether they agree or disagree with the statement “When moving from one place to another, I prefer (if available) public transportation, cycling, walking or carpooling.” 17.11 % of the respondents totally agreed with the statement and 25.00 % somewhat agreed with it. About nine per cent did not agree nor disagree, while almost 33 % of the respondents somewhat disagreed and almost 16 % totally disagreed with the statement.

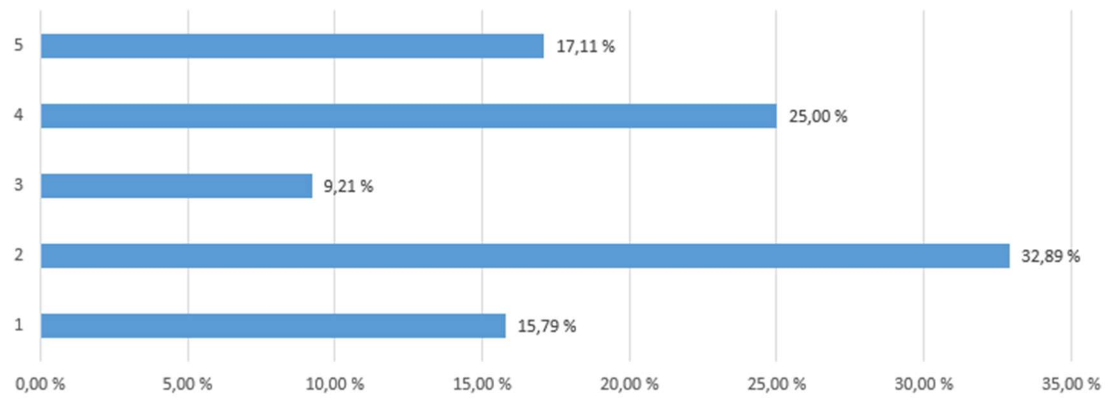

Figure 22. Distribution of All Responses to “When moving from one place to another, I prefer (if available) public transportation, cycling, walking or carpooling.”

The association between the answers to question 14 and the background variables is moderate except for gender it is weak. The strongest association is between occupation and question 14 answers which means that the answers are somewhat dependent on the occupation of the respondent.

Background Variable	**Cramér’s V**
Age	0.320
Gender	0.195
Living Environment	0.268
Education	0.322
Occupation	0.349

Table 10. Cramér’s V Values of Background Variables for “When moving from one place to another, I prefer (if available) public transportation, cycling, walking or carpooling.”

The majority of the respondents working in a specialist role (80.00 %) somewhat or totally disagree with the statement, so most of them would not prefer the alternative transportation modes. Also, the majority of the respondents working at a management level (66.66 &) would not prefer them either. Also, over half of the employee-level respondents (62.50%) and worker-level respondents (52.63 %) would not prefer public transportation, walking, cycling nor carpooling. When it comes to students, the majority of them (79.17 %) addressed that they would at least somewhat prefer one of these alternative transportation modes whereas only little more than 20 % of them would not prefer them. Exactly half of the unemployed respondents answered that they would prefer environmentally friendly transportation methods and half of them would not. Even though the answers divide exactly in half, it is notable that 50 % of them answered that they totally agree with the statement, whereas the negative answers were mainly for "somewhat disagree" option.

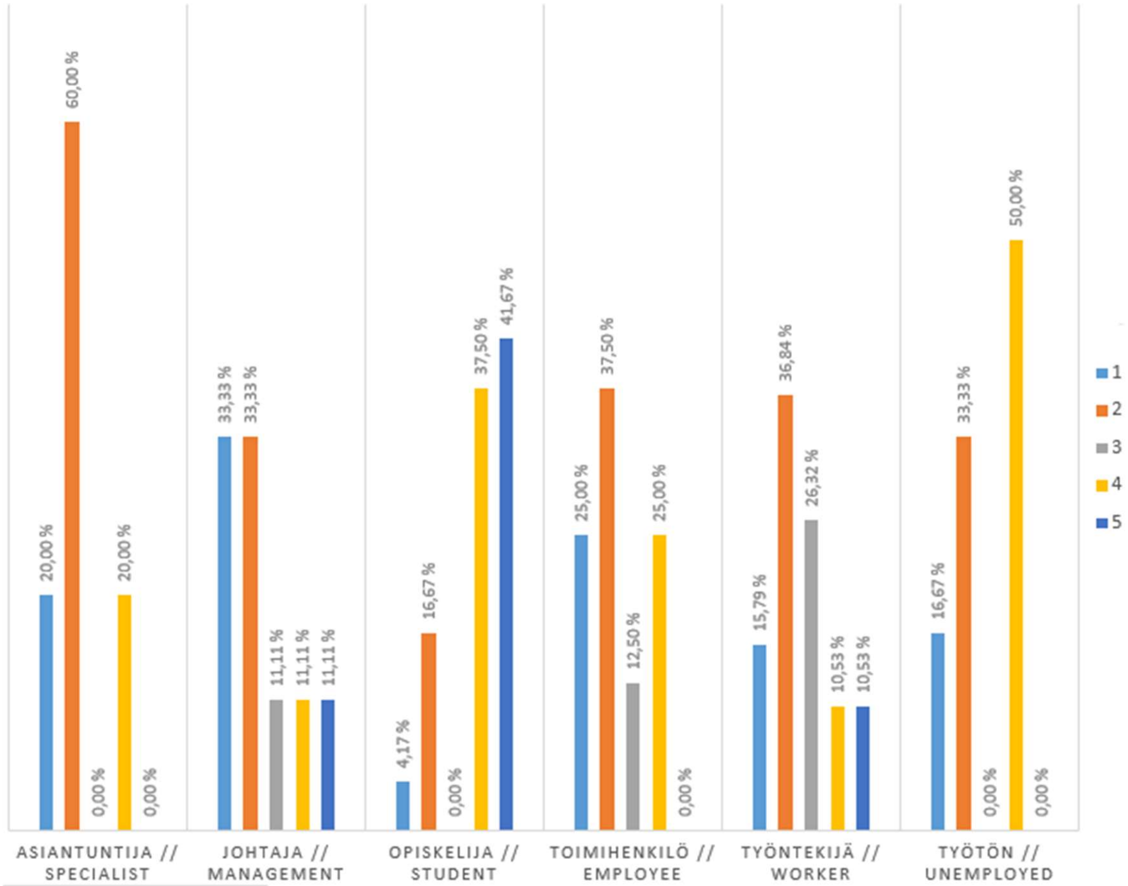

Figure 23. Distribution of Answers to "When moving from one place to another, I prefer (if available) public transportation, cycling, walking or carpooling" by Occupation.

4.2.7 Carbon Offsetting

Question 15 had a statement about carbon offsetting. The respondents had to again choose whether they agree or disagree with the statement, which in this question was "I find carbon offsetting as a functional way to reduce the environmental impact of my purchase." Almost 40 % of the respondents do not disagree nor agree with the statement, whilst over 50 % somewhat or totally agree with it. Only about 10 % of the respondents somewhat or totally disagreed with the statement.

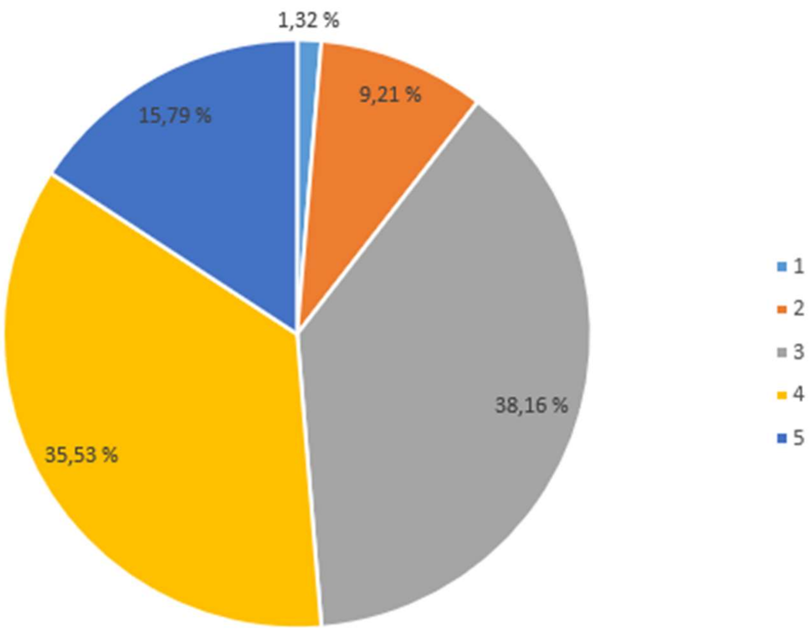

Figure 24. Distribution of All Responses to "I find carbon offsetting as a functional way to reduce the environmental impact of my purchase."

The association between the variables is moderate according to the Cramér's V values and again relatively stable despite the background variable. The strongest association is between question 15 answers and the age of the respondent.

Background Variable	Cramér's V
Age	0.299

Gender	0.251
Living Environment	0.247
Education	0.250
Occupation	0.265

Table 11. Cramér's V Values of Background Variables for "I find carbon offsetting as a functional way to reduce the environmental impact of my purchase."

Most respondents who are under 20 years old do not agree nor disagree with the stamen and the rest 22.22 % of them somewhat agree with it. Out of 20- to 29-year-old respondents 16 % somewhat or totally disagree and 60 % somewhat or totally agree with the statement. 24% of the respondents in this age group do not have a strong opinion. When it comes to respondents between the age of 30 and 39, most of them (57.14 %) do not agree nor disagree with the statement addressed in the question. Little over 35 % of them somewhat agree and little over seven per cent somewhat disagree with the statement.

Out of respondents between 40 and 49 years old approximately 1/10 does not agree nor agree and little more than 20 % totally agree with the statement. The majority of them answered that they somewhat agree. Almost 20 % of the 50- to 59-year-old respondents say they somewhat disagree with the statement regarding carbon offsetting and almost half of the respondents in the same age group say they do not agree nor disagree. Over 35 % of the respondents somewhat agree with the statement, but no one totally agrees. When it comes to respondents over 60 years old, most of them, almost 63 % somewhat or totally agree with the statement in question 15, while 25 % of them do not have an opinion and the rest 12.50 % somewhat disagree with the statement. No one totally disagreed in the age group of over 60 years old.

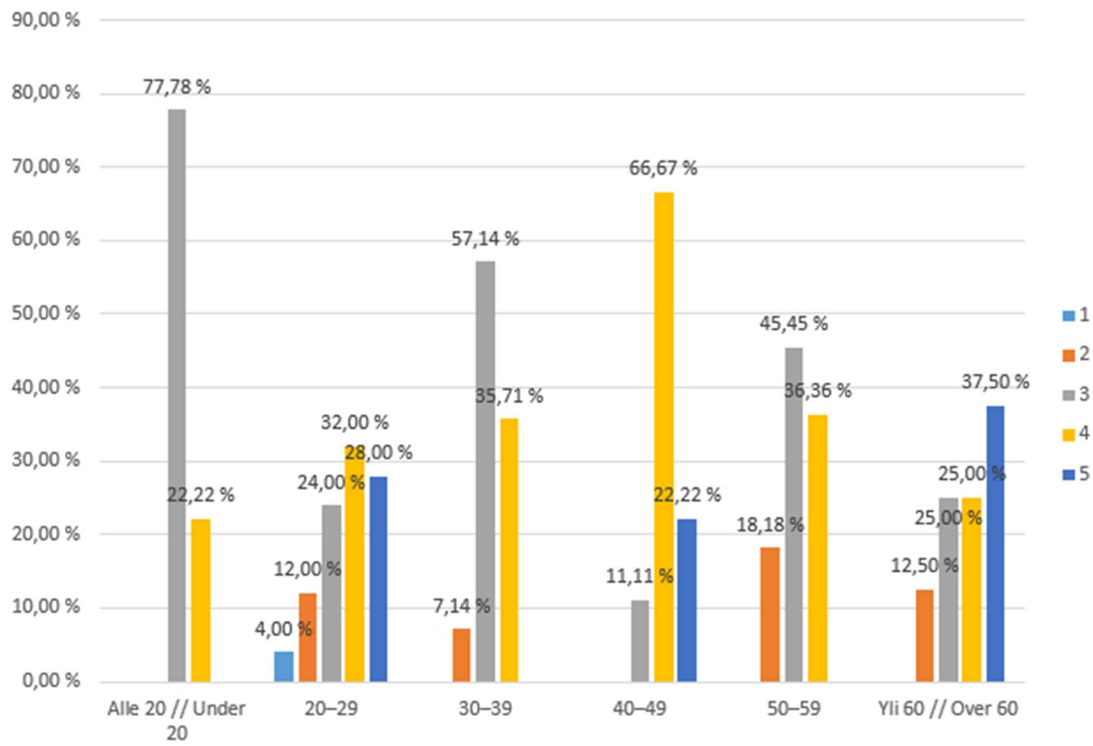

Figure 25. Distribution of Answers to "I find carbon offsetting as a functional way to reduce the environmental impact of my purchase" by Age Group.

4.2.8 Making Employees Committed by Training Them

Question 16 included a statement "Training employees is a good way to make them committed to achieve company's goals" and the respondents chose the best alternative based on whether they agree or disagree with the statement. When all the responses are viewed together, 47.37 % of the respondents totally agree with the statement and 44.74 % somewhat agree with the statement. Only little less than seven per cent does not address their opinion and only 1.32 % of the respondents somewhat disagree and no one totally disagrees. Thus, over 90 % of the respondents find training a good way to make employees committed to the company's objectives.

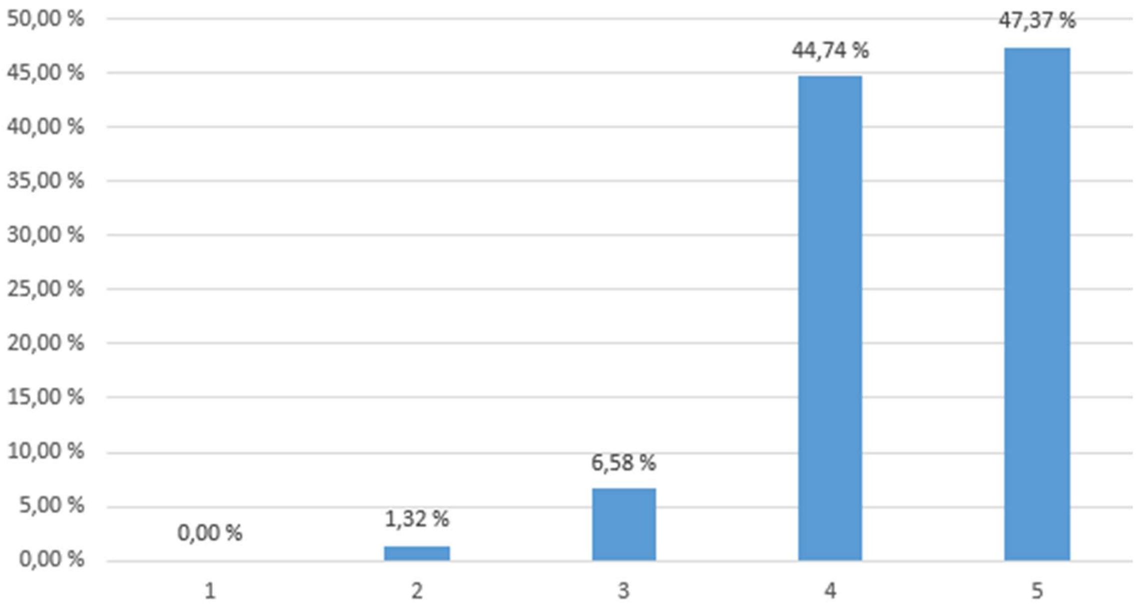

Figure 26. Distribution of All Responses to "Training employees is a good way to make them committed to achieve company's goals."

There is a weak to moderate association between the background variables and the answers to question 16. The opinions of the respondents to the statement are strongest dependent on the education of the respondents. The Cramér's V value for education is 0.352.

Background Variable	Cramér's V
Age	0.332
Gender	0.279
Living Environment	0.165
Education	0.352
Occupation	0.283

Table 12. Cramér's V Values of Background Variables for "Training employees is a good way to make them committed to achieve company's goals."

Out of the respondents who have a master's degree everyone somewhat or totally agrees with the statement, approximately 77 % somewhat agree and 23 % totally agree.

For the respondents who have completed a bachelor's degree the responses are divided equally between choices "somewhat agree" and "totally agree". When it comes to high school graduates, as much as almost 73 % totally agree with the statement and approximately 23 % somewhat agree with the statement. Little less than five per cent of the respondents with a high school degree do not disagree nor agree.

50 % of respondents with a vocational degree totally agree with the statement that training is a good way to make employees committed. One third of vocational degree holders somewhat agree with the statement and approximately 17 % do not disagree nor agree. The distribution of answers of respondents who have only completed mandatory basic education is a little different from the others. About 11 % of them totally agree and little more than 55 % somewhat agree with the statement. A little over 20 % of the respondents with only basic education do not have a strong opinion and about 11 % somewhat disagree with the statement. Overall, it appears that generally respondents with higher education level tend to find employee training as a better way of making them committed than respondents with lower education level.

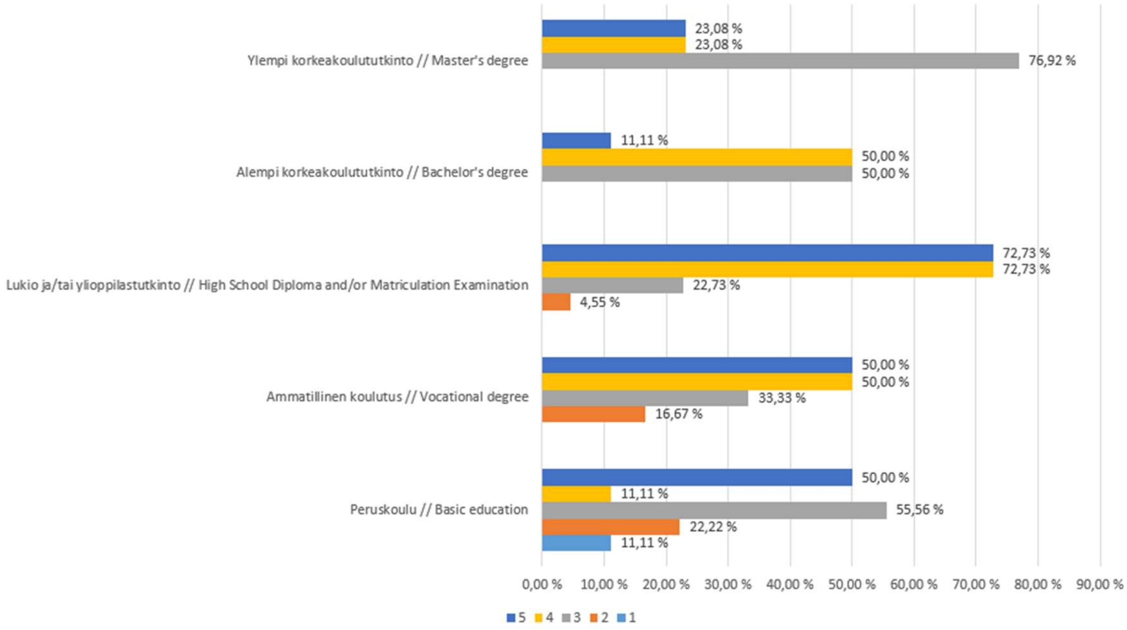

Figure 27. Distribution of Answers to "Training employees is a good way to make them committed to achieve company's goals" by Education.

4.2.9 Awareness of Environmental Actions and Sustainability Goals of Companies

In the question number 17, the respondents needed to address whether they agree or disagree with a statement "I am aware of the environmental actions and sustainability goals of the companies whose products I buy or whose services I use." The responses are distributed relatively equally between the choices, except for only about 2.50 % totally agree with the statement. About 29 % of the respondents somewhat agree and approximately 28 % somewhat disagree with the statement. A little less than 20 % totally disagree with the statement and little more than 21 % do not agree nor disagree.

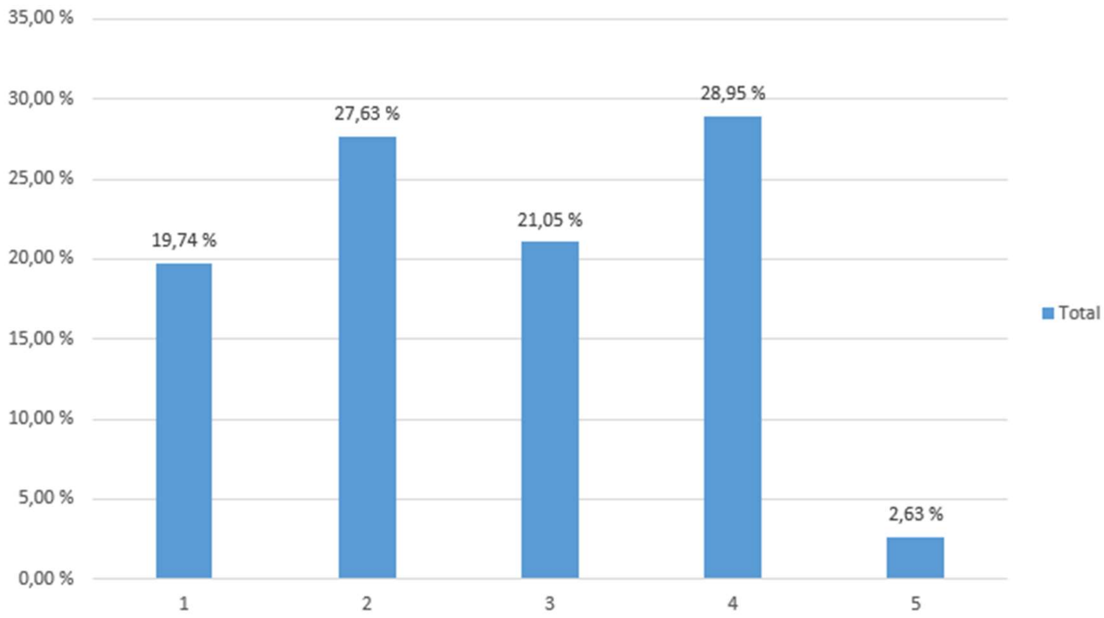

Figure 28. Distribution of All Responses to "I am aware of the environmental actions and sustainability goals of the companies whose products I buy or whose services I use."

According to the Cramér's V values in the table below, there is again moderate association between each background variable and the answers to question 17. The strongest association is between the gender of the respondent and their opinion on the statement. Thus, the opinion is somewhat dependent on the respondent's gender.

Background Variable	**Cramér's V**
Age	0.275
Gender	0.327
Living Environment	0.221
Education	0.234
Occupation	0.315

Table 13. Cramér's V Values of Background Variables for "I am aware of the environmental actions and sustainability goals of the companies whose products I buy or whose services I use."

When looking at the distribution of answers to question 17 by gender, no one of the male respondents totally agrees with the statement, but over 22 % of them somewhat agree that they are aware of the environmental actions and sustainability goals of the companies who they use. Little over 11 % of the male respondents do not have a strong opinion while almost 45 % somewhat and over 22 % totally disagree with the statement. Only about four per cent of female respondents totally agree and nearly 33 % somewhat agree with the statement. Almost 27 % of the female respondents do not address strong opinion, little more than 18 % somewhat disagree and same percentage totally disagree. In conclusion, female respondents tend to focus more on the environmental actions and sustainability goals of the companies whose products or services they use.

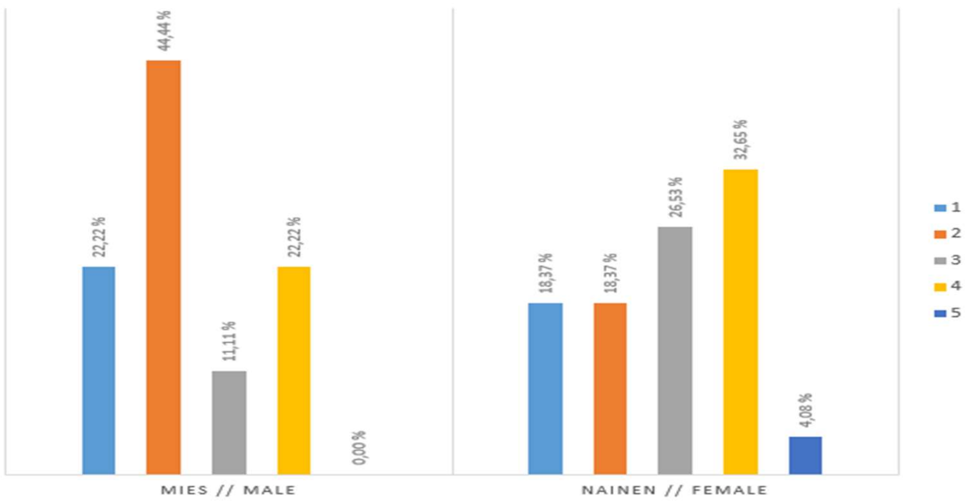

Figure 29. Distribution of Answers to “I am aware of the environmental actions and sustainability goals of the companies whose products I buy or whose services I use” by Gender.

4.2.10 Should Companies Have a Distinct Environmental Strategy and Plan?

Question 19 included the statement “Companies should have an explicit environmental strategy and a clear plan for improving environmental matters in their operation” and the respondents had to choose the best alternative based on their opinion. Most of the respondents somewhat (47.37 %) or totally (39.47 %) agree that companies should have a distinct environmental strategy. Only 10.53 % of all respondents do not have an opinion and 1.32 % somewhat and 1.32 % totally disagree with the statement.

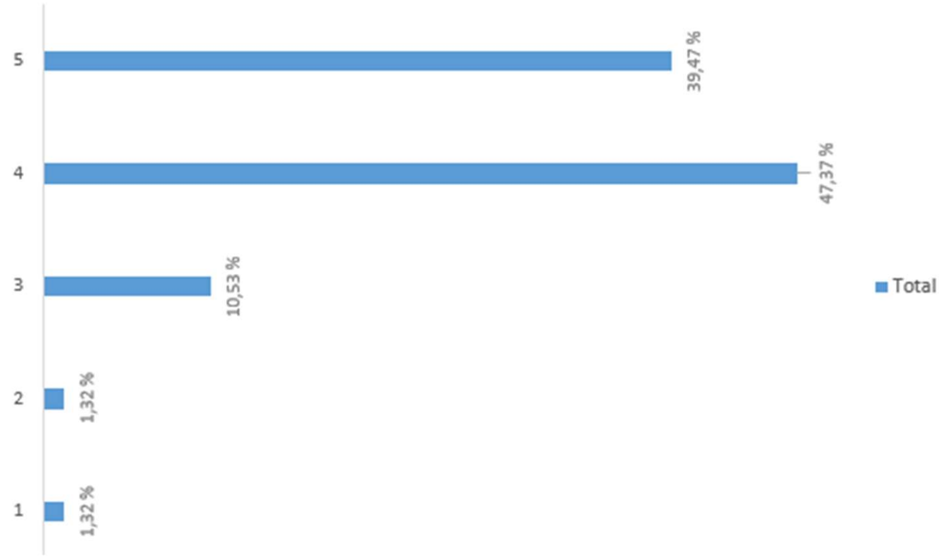

Figure 30. Distribution of All responses to statement "Companies should have an explicit environmental strategy and a clear plan for improving environmental matters in their operation."

When it comes to question 18 responses, they are dependent most on the gender of the respondents based on the Cramér's V values. However, the association between the responses and all background variables is moderate.

Background Variable	Cramér's V
Age	0.252
Gender	0.327
Living Environment	0.277
Education	0.273
Occupation	0.304

Table 14. Cramér's V Values of Background Variables for "Companies should have an explicit environmental strategy and a clear plan for improving environmental matters in their operation."

The distribution of question 18 answers of male respondents varies somewhat from the distribution of female respondents. A little more than 20 % of male respondents totally agree with the statement, whereas almost 50 % of female respondents totally agree with the statement. Over 55 % of male respondents somewhat agree and little less than 43 % of female respondents somewhat agree with the statement. Approximately 15 % of male respondents and about eight per cent of female respondents neither agree nor disagree with the statement. No female respondent disagrees with the statement, but approximately four per cent of male respondents somewhat and the same amount totally disagrees with the statement.

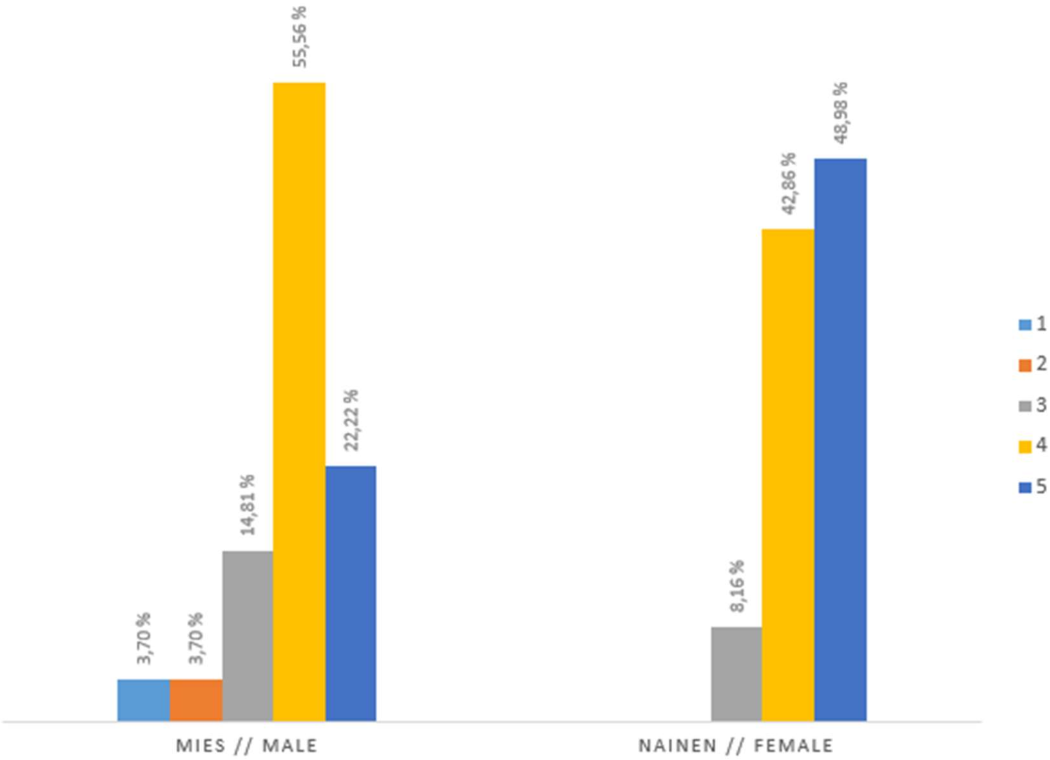

Figure 31. Distribution of Answers to "Companies should have an explicit environmental strategy and a clear plan for improving environmental matters in their operation" by Gender.

4.2.11 Taking Environment into Account – Positive Way to Stand Out?

Question 20 included a statement "Taking environmental matters into account help companies to stand out in a positive way." Almost half of all respondents (47.37 %) totally agree with the statement and over 43 % somewhat agree with it. Only little less than eight per cent of all respondents somewhat disagree and 1.32 % totally disagree with it. Most respondents find taking environmental matters into account a good way for companies to stand out.

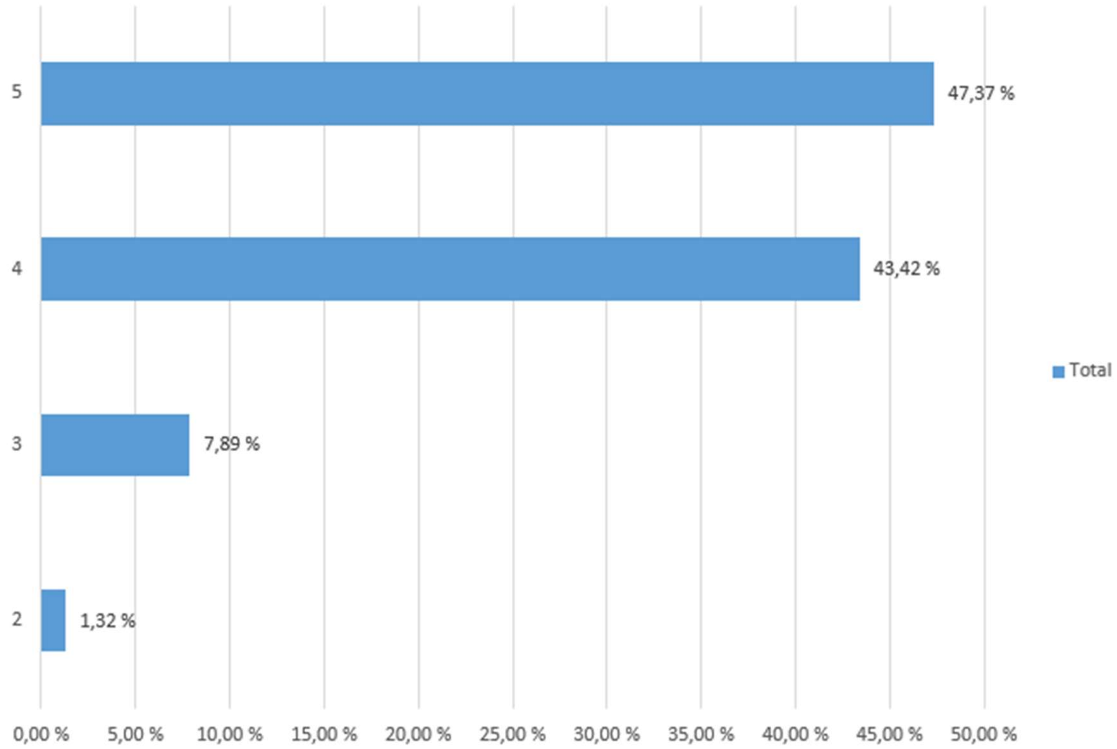

Figure 32. Distribution of All Responses to "Taking environmental matters into account help companies to stand out in a positive way."

The association between living environment and the answers to question 19 is weak and for most other background variables the association is relatively moderate. However, the association between the gender of the respondent and the answers to question 19 is relatively strong.

Background Variable	**Cramér's V**
Age	0.326
Gender	0.403
Living Environment	0.145

Education	0.338
Occupation	0.332

Table 15. Cramér's V Values of Background Variables for "Taking environmental matters into account help companies to stand out in a positive way."

Most of the female respondents (61.22 %) totally agree that taking environmental matters into account a good way for companies to stand out, almost 35 % somewhat agree with the statement and only about four per cent do not have a strong opinion. No one of the female respondents disagree with the statement. Over 22 % of the male respondents totally agree and nearly 60 % of them somewhat agree with the statement in question 19. Little less than 15 % of the male respondents do not address any strong opinion while only about four per cent of male respondents somewhat disagree. Both female and male respondents appear to find taking environmental matters into account a good way for companies to stand out, but women are little more likely to think that way than men.

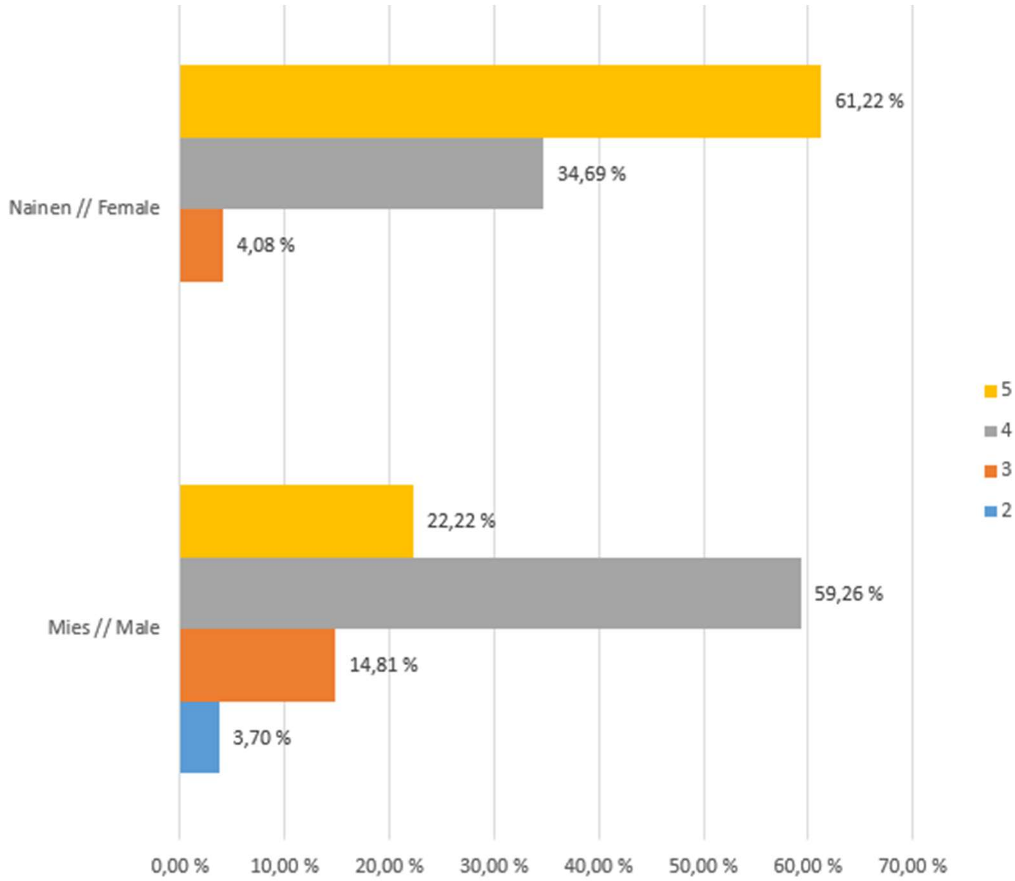

Figure 33. Distribution of Answers to “Taking environmental matters into account help companies to stand out in a positive way” by Gender.

4.2.12 Best Way for Companies to Improve Their Environmental Sustainability

In question 20 the respondents had to choose what they find the best way for companies to improve the environmental sustainability of their operations. There were six choices including the option “Other”. All the respondents chose from the five ready choices. As the bar chart below shows, “Improving product life-time” was the most answered option since almost 37 % of the respondents chose it. The second most popular choice was “Recycling and using recycled materials” (26.32 %) and the third most popular opinion “Using renewable energy” (25.00 %). Only little more than ten per cent of the respondents chose “Locating production close to the market” and only little over one per cent answered, “Carbon offsetting”. Since only less than half of the respondents said they could define carbon offsetting, it is not surprising it was the least popular answer in this question.

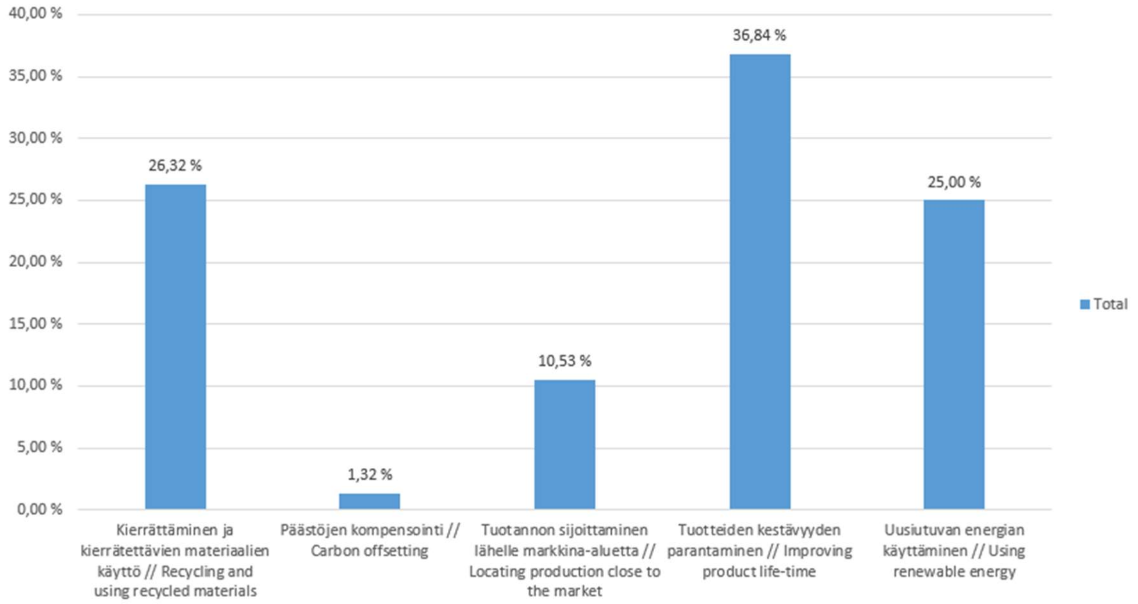

Figure 34. Distribution of All Responses to "What of the following is the best way companies can improve the environmental sustainability of their operations?"

The Cramér's V values displayed below show that there is again moderate association between each background variable and answers to question 20. However, the answers to the question were dependent strongest on the living environment of the respondent.

Background Variable	**Cramér's V**
Age	0.223
Gender	0.287
Living Environment	0.301
Education	0.216
Occupation	0.274

Table 16. Cramér's V Values of Background Variables for "What of the following is the best way companies can improve the environmental sustainability of their operations?"

The majority (58.33 %) of the respondents living in a city center find improving product life-time the best way companies can contribute to environmental sustainability. Approximately 20 % of the city-center-living respondents find using renewable energy and about 17 % recycling and using recycling materials as the best way to improve environmental sustainability of companies' operations. Only roughly four per cent answered carbon offsetting and no one answered, "Locating production close to the market".

When it comes to the respondents living in a population center or other urban area, the answers are distributed relatively equally. Approximately 29 % of them found using renewable energy as the best improvement companies could make and about 25 % answered "recycling and using recycled materials" and also about 25 % answered "improving product life-time". Little fewer respondents in this group, approximately 19 %, answered "locating production close to the market" and no one answered carbon offsetting.

The most popular way to improve the environmental sustainability of companies' operations among the respondents living in the countryside is recycling since over 38 % chose this answer. Little less than 29 % answered "improving product life-time" and gradually less than 24 % answered "using renewable energy". Only about ten per cent answered, "locating production close to the market" and no one answered carbon offsetting. Overall, according to the responses, recycling and improving product life-time are the best ways for companies to improve environmental sustainability, but life-time improvement is most popular among respondents living in cities, renewable energy most popular amongst population-center-inhabitants and recycling amongst respondents living in the countryside.

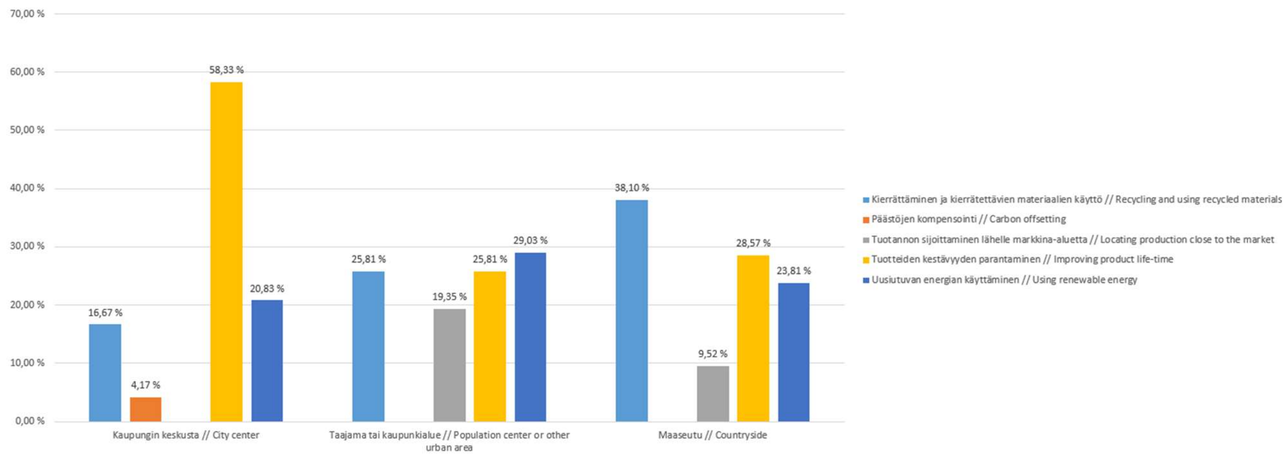

Figure 35. Distribution of Answers to “What of the following is the best way companies can improve the environmental sustainability of their operations?” by Living Environment.

4.2.13 Most Important Driving Force for Environmentally Sustainable Operations

In question 21, the respondents were asked what the most important thing that drives companies to improve in a more environmentally sustainable way. There were five options, including the option “Other”, but no one chose it. Almost half of all respondents answered that social responsibility should be the most important driving force for operating in a more sustainable way. Approximately 24 % of the respondents find that legislation and about 22 % find that financial benefits should be the drivers for the change. Only about five per cent think that pressure from society should be the force driving companies to environmentally sustainable operations.

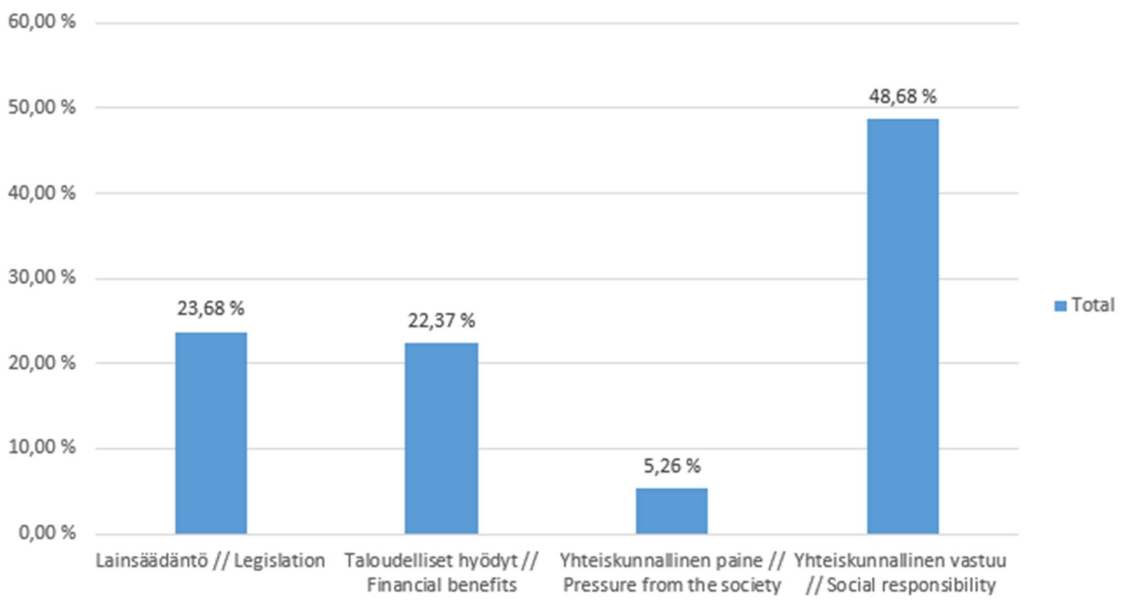

Figure 36. Distribution of All Responses to "What should be the most important factor driving companies to improve their environmental sustainability?"

The Cramér's V values for each background variable and the answers to question 21 show that there is weak association between the living environment of the respondents and answers to this specific question whereas other variables the association is moderate. The strongest association is between the answers and the gender of the respondent.

Background Variable	**Cramér's V**
Age	0.288
Gender	0.299
Living Environment	0.181
Education	0.273
Occupation	0.287

Table 17. Cramér's V Values of Background Variables for "What should be the most important factor driving companies to improve their environmental sustainability?"

Over half, about 53 %, of the female respondents answered social responsibility and little less than 25 % answered legislation. Little over 40 % of the female respondents answered financial benefits and little more than eight per cent answered social pressure. When it comes to male respondents, over 40 % of them think that social responsibility should be the sustainability driver and approximately 37 % that the financial benefits should be the driving force. Little more than 22 % of the male respondents answered legislation and no one finds that pressure from the society should be the sustainability driver.

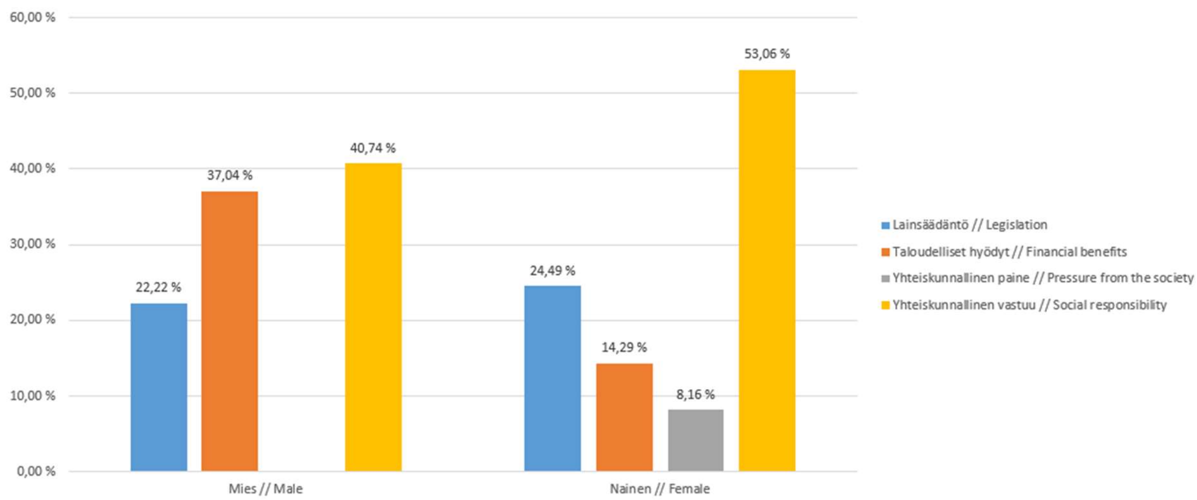

Figure 37. Distribution of Answers to “What should be the most important factor driving companies to improve their environmental sustainability?” by Gender.

4.2.14 Are Companies’ Actions Aligned with Their Public Disclosures?

In question number 22, the respondents were asked to address their opinion on the statement “Companies’ actions regarding environmental matters are NOT aligned with their public disclosures.” When viewing all responses to the question, no one totally disagrees with it, but almost 24 % of the respondents somewhat disagree with the statement. Almost one third (32.89 %) of the respondents do not agree nor agree, while over 35 % somewhat agree with the statement. Nearly eight per cent totally agree with it. Overall, it appears that more respondents think that companies’ environmental actions are not aligned with their public disclosures.

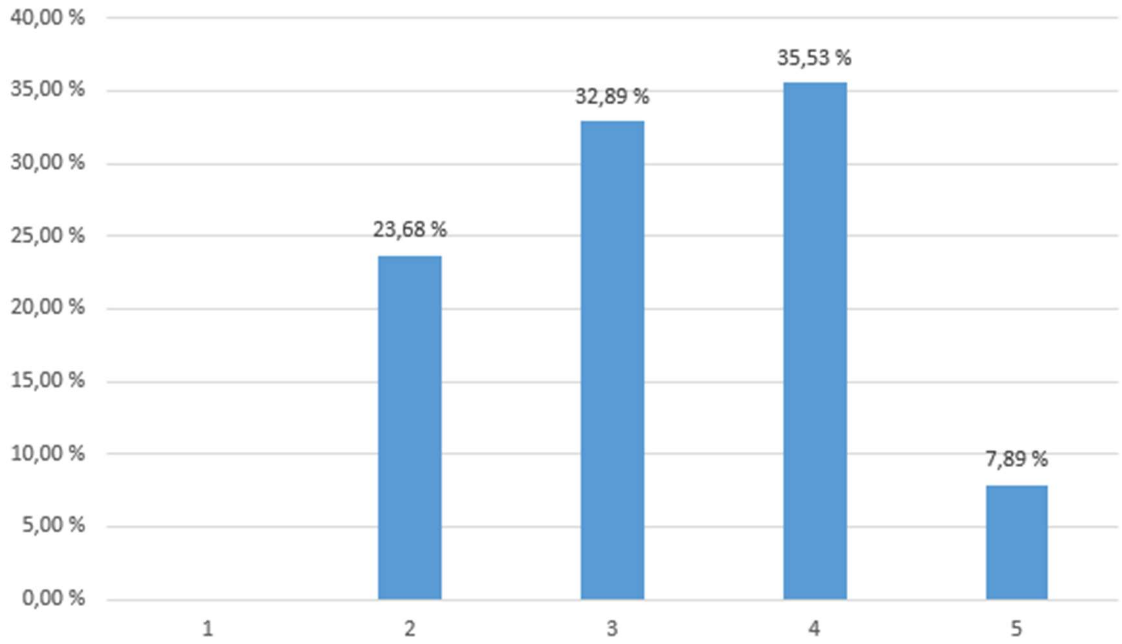

Figure 38. Distribution of All Responses to “Companies’ actions regarding environmental matters are NOT aligned with their public disclosures.”

The association between the background variables and the answers to question 22 is weak when it comes to the living environment and education of the respondents. For other background variables the association is moderate and the answers to the question are most dependent on the gender of the respondents.

Background Variable	**Cramér’s V**
Age	0.308
Gender	0.345
Living Environment	0.111
Education	0.179
Occupation	0.344

Table 18. Cramér’s V Values of Background Variables for “Companies’ actions regarding environmental matters are NOT aligned with their public disclosures.”

When looking at male respondents, no one of them totally agree nor disagree with the statement, but over 40 % somewhat disagrees with the statement. Little less than thirty per cent (29.63 %) of the male respondents do not agree nor agree and same percentage of them somewhat agree with the statement. Over 12 % of the female respondents totally agree with the statement and almost 40 % somewhat agree with it. Approximately 35 % of female respondents do not agree nor disagree with the statement while little more than 14 % somewhat disagrees. No one of them totally disagrees with the statement. Thus, it appears that women are more likely to think that companies' environmental actions are not aligned with what they say they do.

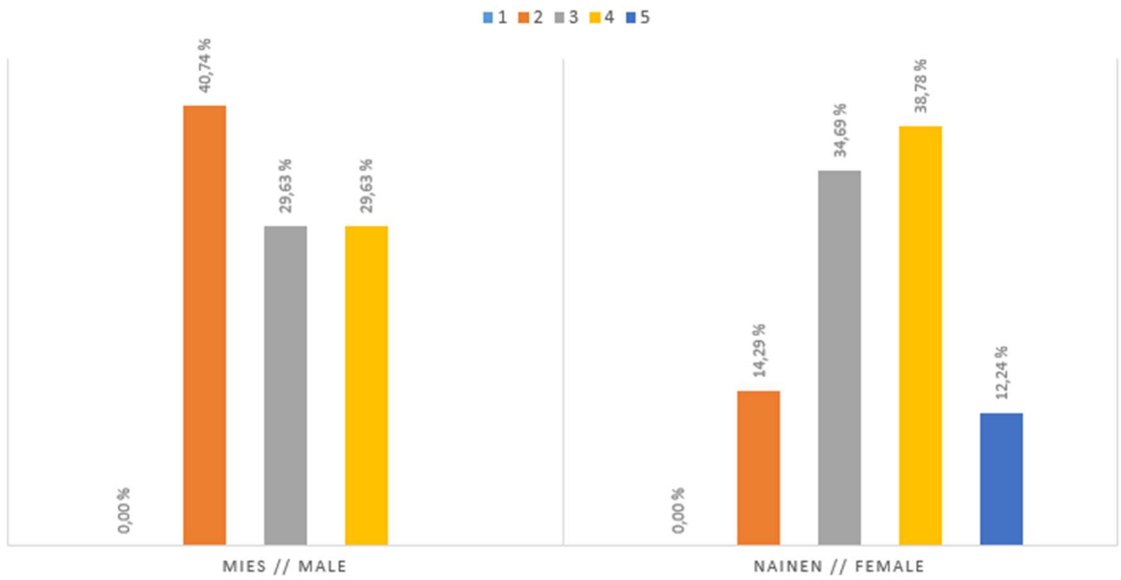

Figure 39. Distribution of Answers to "Companies' actions regarding environmental matters are NOT aligned with their public disclosures" by Gender.

4.2.15 Importance of Environmental Matters in the Time of Other Crises

The last question stated, "Global crises, such as war, energy crisis, food crisis and high inflation make environmental questions less important." The opinions of the respondents are distributed equally. About 16 % of the respondents totally agree and almost 29 % somewhat agree with the statement. Approximately 24 % do not address strong opinion, 25 % somewhat disagrees and about seven per cent totally disagrees with the statement.

It appears that generally the respondents find environmental concerns less important when facing other serious global events.

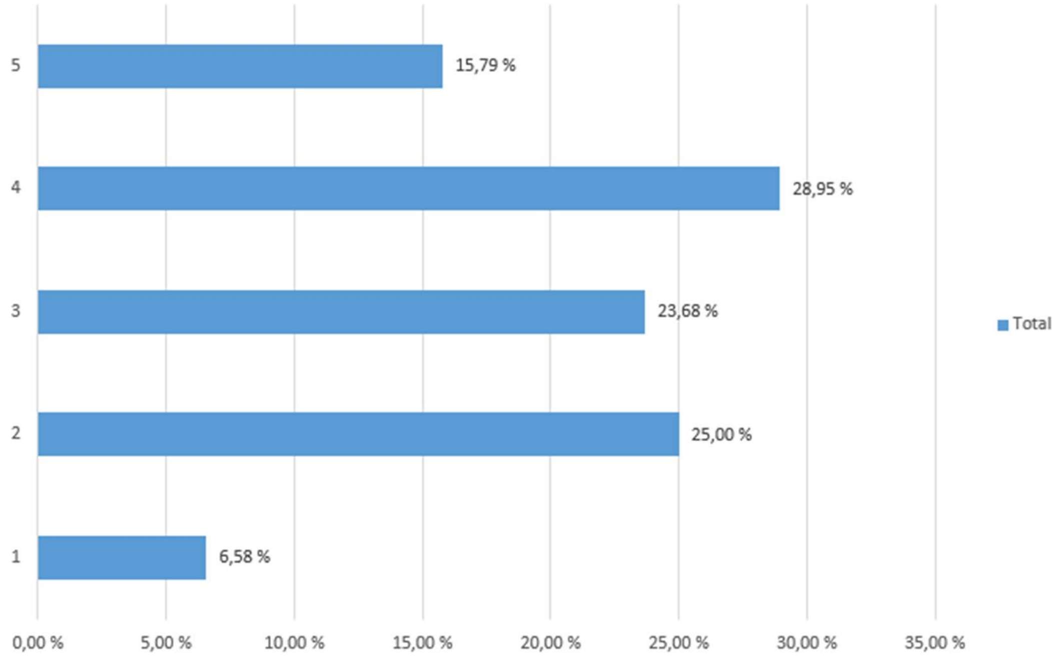

Figure 40. Distribution of All Responses to "Global crises, such as war, energy crisis, food crisis and high inflation make environmental questions less important."

The association between question 23 answers and each of the background variables is relatively moderate. The opinion on the statement in question 23 is dependent strongest on the education of the respondent.

Background Variable	Cramér's V
Age	0.233
Gender	0.225
Living Environment	0.257
Education	0.319
Occupation	0.261

Table 19. Cramér's V Values of Background Variables for "Global crises, such as war, energy crisis, food crisis and high inflation make environmental questions less important."

One third (33.33 %) of the respondents who have only completed basic education totally agreed and about 11 % somewhat agreed that global crises make environmental concerns less important, whereas almost 45 % of them do not have a strong opinion and approximately 11 % of them somewhat disagrees with the statement. No one of the respondents with only basic education background totally disagrees with the statement. The majority of the vocal degree holders somewhat agreed (58.33 %) or totally agreed (33.33 %) with the statement. About eight per cent of them do not agree nor disagree and none of them somewhat or totally disagree. For high school graduates the answers are more distributed than for the previous groups. Approximately 23 % of them totally agree with the statement, whilst little more than 18 % of them somewhat agree with the statement and the same percentage does not have an opinion. Over 27 % of high school diploma holders somewhat disagree and nearly 14 % totally disagree with the statement.

When it comes to bachelor's degree holders, 40 % of them somewhat disagree that global crises would make environmental matters less important and 35 % of them somewhat agree with the same statement. 25 % of bachelor's degree holders do not address their opinion. Over 15 % of the respondents who have a master's degree totally disagree and over 30 % somewhat disagree with the statement. Little more than 23 % of them somewhat agree and none of them totally agree with the statement. Little over 30 % do not have an opinion on the statement. Overall, it appears that the higher educated the respondents are, more likely they are to see the importance of environmental matters in the times of other crises, too.

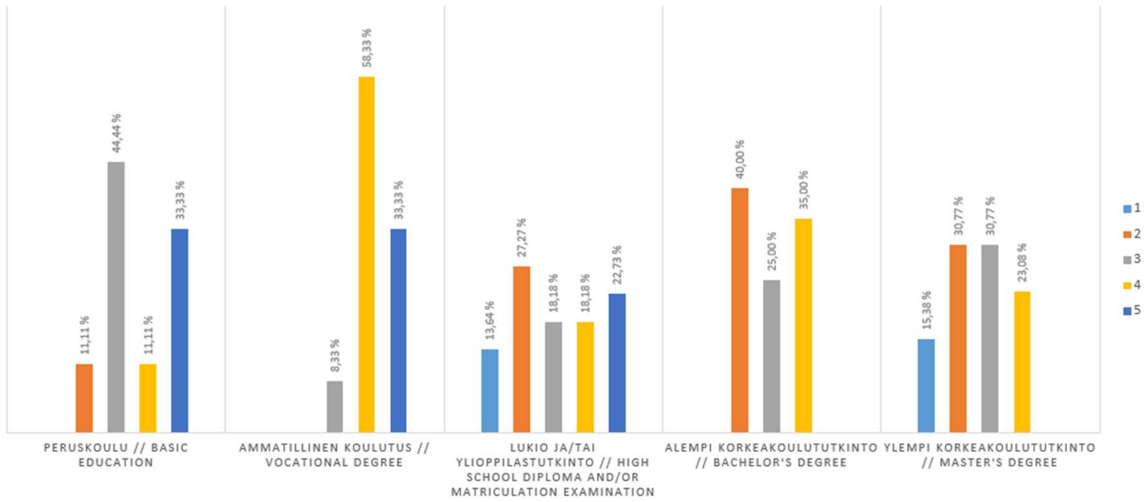

Figure 41. Distribution of Answers to “Global crises, such as war, energy crisis, food crisis and high inflation make environmental questions less important” 23 by Education.

5 Discussion and Managerial Implications

According to the answers of the survey, consumers are generally aware of environmental matters and at least sometimes searching environmentally friendly alternatives when buying products or services. Also, they focus on the packaging materials of products and most of the consumers – over 60 % of the respondents – address preference for companies that take environmental sustainability into account in their operations. However, only a minority of consumers are willing to pay more than 25 % more for an eco-friendly product or service. The questions or statements that discussed carbon offsetting got the most "No opinion" answers likely due to the fact that most respondents are not familiar with the term. In conclusion, the consumers in Finland appear to generally value products and services that has a reduced environmental impact.

When looking at how different consumer groups view environmental matters, there was from weak to moderate association between the background variables and the responses to each question. However, the answers to certain questions were most often strongest dependent on the gender of the respondents and second most dependent on education of the respondents. In 9 of out of 15 actual survey questions, the strongest association was between the gender of the respondent and the answer to the question, whereas for three questions the answers were dependent strongest on the education and the rest three associated strongest with occupation, age and living environment. Based on the answer distributions by gender and education, it appears that female consumers are more likely to find environmental sustainability actions as value drivers than male consumers. Also, the higher the education, the more likely the consumer finds environmental sustainability as a value creator for companies.

According to the existing literature and research covered in the literature review, strategic planning and assessment, stakeholder cooperation and appropriate management models are important factors how companies can contribute to the environmental sustainability improvement process in terms of corporate governance. When it comes to the research results and how consumers see corporate governance of environmental matters, it appears that consumers are not necessarily that aware of companies' decision making and objectives regarding environmental sustainability. As question 17 results show, more respondents somewhat or totally disagree than agree with the statement that they are aware of the environmental actions and sustainability goals of the companies whose products they buy or services they use. However, according to the survey results, most consumers still expect companies to have a distinct environmental strategy and a sustainability improvement plan even though they would not be themselves significantly aware of or interested in them. Also, the majority find taking environmental sustainability into account helpful for companies to stand out.

The majority of consumers think that the feeling of social responsibility should be the main driver for companies' sustainable actions and therefore organizations should assess the environment and the region they operate in and assess the atmosphere there. It can be useful to engage the community in the planning and decision-making process to get to know their thoughts and ideas on what is important. The second most popular environmental sustainability drivers according to the research are legislation and financial benefits, so these are also some factors that companies should bear in mind when planning and making decisions regarding environmental matters.

For instance, setting financial objectives and communicating about them and how reaching them can benefit the stakeholders as well is important. Also, as consumers are sometimes feeling that companies' public disclosures are not really aligned with the actions they take, open communication and engaging as many stakeholder groups to the planning and decision making can improve the transparency in the company. It is also important to use clear and correct language in disclosures, marketing, and communication to minimize misunderstandings and their consequences like poor reputation.

As the world has faced numerous severe crises during the past few years, it is also important to focus on what is important to the consumers and concentrate on these things. For instance, during the past years COVID-19 pandemic, war in Ukraine and the energy crisis, inflation and bank crisis following it has affected the consumers. Depending on different factors, such as education and income, these can significantly affect the consumers' willingness and preparedness to use their money on certain things and also make it harder for them to survive from day-to-day living costs. Therefore, it is important that companies are always aware of the global situation and ready to take necessary actions to ensure the perpetuity of their operations. For example, if consumers are having less money to consume on certain products and services, it might be useful to keep the prices lower by postponing green investments or making trade-offs. However, in the long run companies should still focus on improving their environmental sustainability, since many other crises are temporary, but environmental concerns are not going to disappear any time soon.

6 Conclusion

The purpose of this thesis and research was to form a comprehensive general understanding on environmental sustainability, how companies can contribute to it in their operations and to study how consumers in Finland view environmental sustainability in business and what are their thoughts on governing it. In the literature review part environmental sustainability and its building blocks as well as corporate governance of environmental matters were covered to form the basis for the empirical part that consisted of interpreting results of quantitative Microsoft Forms survey carried out for this thesis project. The research questions that the thesis is constructed around are:

1. Does taking environmental sustainability into account create additional value to companies' stakeholders based on the opinions of Finnish consumers?

2. How could companies improve their corporate governance of environmental sustainability?

According to the literature covered in the literature review part of the thesis, there is a general pressure from society to companies to focus on environmental sustainability in their operations. The reason behind the pressure can vary: For business partners it can be possible savings that can be achieved by environmental practices and for customers and the government the will to ensure a viable planet for future generations, too. The company itself is also likely to be willing to ensure profitable and continuing business operations in the future as well. Overall, the awareness of environmental matters has increased, and the environmental knowledge of consumers is also on a good level, at least according to question of the survey in which the respondents could evaluate their own knowledge of the topic.

6.1 Answers to the Research Questions

In the literature review value creation was described as taking actions that turn into something that answers to someone’s needs. Even though the questions of the survey focused on the customer point of view, but when consumers expect and are willing to buy environmentally sustainable products and services, a company would not benefit its stakeholders, like the employees or contractors, if it did not meet the requirements of the consumers. Eventually, consumers are likely to stop buying from a company that does not share and respect their values. This would harm the employees since they would not have that much work to do and the contractors would also lose money and time if they were tied to this kind of company, for instance due to a fixed-period contract. Therefore, it can be concluded that taking environmental sustainability into account creates additional value to companies’ stakeholders according to Finnish consumers.

When it comes to the improving the corporate governance of environmental matters according to the consumers opinions, it can be concluded that even though not being necessarily aware of them, consumers expect companies to set clear goals and plan strategically how the environmental impact of their operations can be minimized. Consumers also expect transparent decision-making and reporting from companies. Since majority of consumers think that companies’ actions are not aligned with their public disclosures, frequent, comprehensive, and transparent communication about environmental objectives, the improvement processes and the achievements could affect positively consumers’ opinion on this topic. Nevertheless, companies are in a difficult position as almost half of the respondents think that other than environment-related global crises make environmental matters less important. Therefore, companies must observe the global situation continuously and be ready to react and adapt to changes in the consuming habits of their customers.

6.2 Discussion for Future Research

As sustainability is a current topic, there are many opportunities for future research on the topic. Nevertheless, as the world is constantly changing and for instance technology is developing as well as new research results about environment and sustainability-related matters are likely to come up, need for updated research might come up in the future to be able to access the most accurate and up-to-date results. Therefore, there are many practical reasons to conduct similar research again in the future. In addition to similar research, some more specific and differently limited research could be done to acquire more in-detail information. For example, similar research could be done with a focus on a specific case industry, company, product, or product family. Especially, companies operating in industries that are the most apt to sustainability and environmental-related changes, like the airline and energy industry, could significantly benefit from research that provides them with the consumer point of view.

Some topical research opportunities could include for instance a study on how global crises, such as the COVID pandemic or war and its global consequences, affect consumers' views on sustainability and environmental matters. As the answers to question 23 indicate, environmental concerns are not always seen as important if other severe events occur. Therefore, it could be useful for companies to study how consumers' habits and opinions change when the global or local environment changes fundamentally. Companies could this way prepare and better adapt to changes in the market behavior and ensure the continuation of their operations. Overall, sustainability and environmental matters are broad and current topics and therefore they offer numerous of different research topics, but when it comes to studying the consumer point-of-view, the most beneficial would be most likely to study the topic more in depth with a certain topic-related theme as a limiting factor, like a certain industry as mentioned earlier.

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Appendices

Appendix 1. Microsoft Forms Survey

Kuluttajien näkemys ympäristöystävällisyydestä ja yritysten ympäristöasioiden hallinnasta

(Consumers' Views on Eco-friendliness and Corporate Governance of Environmental Matters)

FI:
Tämän kyselyn tarkoituksena on kerätä Vaasan yliopistossa tehtävää tuotantotalouden pro gradu -tutkielmaa varten aineistoa, jonka pohjalta tehdään puolueeton tarkastelu kuluttajien näkemyksistä liittyen tuotteiden ja palveluiden ympäristöystävällisyyteen, sekä yritysten ympäristöasioiden hallintaan. Vastaajilta kerätään muutamia taustatietoja helpottamaan kerätyn tiedon käsittelyä, mutta muuten vastaaminen tapahtuu anonyymisti. Vastaaminen vie aikaa noin 5–10 minuuttia. Kiitos vastauksista!

EN:
The purpose of this survey is to collect data for a master's thesis in industrial management at University of Vaasa. An unbiased analysis will be carried out based on the collected data. The analysis will focus on consumers' views on environmentally friendly products and services as well as on corporate governance of environmental matters. The respondents are asked a few background questions but otherwise the questionnaire is anonymous. Answering this questionnaire takes approximately from 5 to 10 minutes. Thank you for your time!

Kysymykset ja palautteet // Possible questions or feedback: lauri.fontell@student.uwasa.fi

* Pakollinen

Taustakysymykset // Background Questions

1. Vastaajan ikä // Age of the respondent *

- ○ Alle 20 // Under 20
- ○ 20–29
- ○ 30–39
- ○ 40–49
- ○ 50–59
- ○ Yli 60 // Over 60

2. Sukupuoli // Gender *

- ○ Mies // Male
- ○ Nainen // Female
- ○ Muu // Other

3. Asuinympäristö // Living environment *

- ○ Kaupungin keskusta // City center
- ○ Taajama tai kaupunkialue // Population center or other urban area
- ○ Maaseutu // Countryside

4. Koulutustausta (korkein suoritettu koulutus) HUOM: Alempi korkeakoulututkinto sisältää myös aiemman opistotasoisen tutkinnon! // Educational background (highest completed education) *

- Peruskoulu // Basic education
- Ammatillinen koulutus // Vocational degree
- Lukio ja/tai ylioppilastutkinto // High School Diploma and/or Matriculation Examination
- Alempi korkeakoulututkinto // Bachelor's degree
- Ylempi korkeakoulututkinto // Master's degree
- Akateeminen jatkotutkinto // Postgraduate degree

5. Ammattiasema // Occupation *

- Opiskelija // Student
- Työtön // Unemployed
- Työntekijä // Worker
- Toimihenkilö // Employee
- Asiantuntija // Specialist
- Johtaja // Management
- Yrittäjä // Entrepreneur
- Eläkeläinen // Pensioner

6. Työkokemus // Years of work experience *

- Alle vuosi // Less than a year
- 1-5 vuotta // 1-5 years
- 6-10 vuotta // 6-10 years
- 11-15 vuotta // 11-15
- Yli 15 vuotta // Over 15 years

7. Valitse sellaiset käsitteet, joiden selityksen tiedät tai uskot tietäväsi.

Choose the terms that you are familiar with and/or can define. *

- ☐ Ympäristökestävyys // Environmental sustainability
- ☐ Kiertotalous // Circular economy
- ☐ Päästökompensointi // Carbon offsetting
- ☐ Viherpesu // Greenwashing
- ☐ Uusiutuva (esim. energia tai materiaali) // Renewable (i.e., energy, material)

8. Arvioi oma tietämyksesi ympäristöasoista asteikolla yhdestä kymmeneen (1=ei lainkaan tietämystä, 10=erinomainen tietämys).

Evaluate the level of your knowledge on environmental matters (1=not knowledge at all, 10=excellent knowledge). *

- ○ 10
- ○ 9
- ○ 8
- ○ 7
- ○ 6
- ○ 5
- ○ 4
- ○ 3
- ○ 2
- ○ 1

Varsinaiset tutkimuskysymykset // Actual Research Questions

9. Etsin ja valitsen aktiivisesti ympäristöystävällisiä vaihtoehtoja ostaessani tuotteita tai palveluita.

   When buying products or services, I actively search for environmentally friendly alternatives.

   (5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

   (5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree) *

   ◯ 5

   ◯ 4

   ◯ 3

   ◯ 2

   ◯ 1

10. Valitsen ympäristöystävällisen tai päästöhyvitetyn tuotteen tai palvelun, vaikka se maksaisi toista vastaavaa tuotetta enemmän.

    I usually choose an eco-friendly product or service even though it would be more expensive than alternative products.

    (5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

    (5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree) *

    ◯ 5

    ◯ 4

    ◯ 3

    ◯ 2

    ◯ 1

11. Kuinka paljon enemmän olet/olisit valmis maksamaan ympäristöystävällisemmästä tuotteesta tai palvelusta?

    How much more are you willing to pay for an eco-friendly product or service?

    ◯ Alle 10 % / Under 10 %

    ◯ 11-25 %

    ◯ 25-50 %

    ◯ 51-75 %

    ◯ 76-100 %

    ◯ Yli 100 % // Over 100 %

12. Kiinnitän huomiota tuotteiden pakkausmateriaaleihin, esimerkiksi niiden kierrätettävyyteen tai uusiutuvien tai kierrätysmateriaalien käyttöön.

    I focus on the packaging materials of products, e.g. their recyclability or usage of recycled or renewable materials.

    (5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

    (5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree)
    *

    ○ 5

    ○ 4

    ○ 3

    ○ 2

    ○ 1

13. Suosin sellaisia yrityksiä, jotka tekevät kestäviä valintoja ja huomioivat toimintansa ympäristönäkökulman.

    I prefer companies that make sustainable choices and consider environmental questions. *

    ○ Kyllä // Yes

    ○ Ei // No

14. Suosin liikkuessani paikasta toiseen saatavuuden puitteissa julkisia kulkuneuvoja, pyöräilyä, kävelyä tai esimerkiksi kimppakyytejä.

    When moving from one place to another, I prefer (if available) public transportation, cycling, walking or carpooling.

    (5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

    (5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree)
    *

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    ○ 4

    ○ 3

    ○ 2

    ○ 1

15. Pidän tuotteen tai palvelun päästöjen kompensoimista erilaisin päästöhyvitysohjelmin hyvänä asiana.

I find carbon offsetting as a functional way to reduce the environmental impact of my purchase.

(5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

(5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree)

*

- ○ 5
- ○ 4
- ○ 3
- ○ 2
- ○ 1

16. Työntekijöiden kouluttamisella voidaan sitouttaa heidät paremmin yrityksen tavoitteiden saavuttamiseen.

Training employees is a good way to make them committed to achieve company's goals.

(5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

(5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree) *

- ○ 5
- ○ 4
- ○ 3
- ○ 2
- ○ 1

17. Tutustun niiden yritysten ympäristötoimiin ja -tavoitteisiin, joiden tuotteita ostan tai palveluita käytän.

I am aware of the environmental actions and sustainability goals of the companies whose products I buy or whose services I use.

(5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

(5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree) *

- 5
- 4
- 3
- 2
- 1

18. Yrityksillä tulisi olla selkeä ympäristöstrategia ja suunnitelma ympäristöasioiden huomioimiselle.

Companies should have an explicit environmental strategy and a clear plan for improving environmental matters in their operations.

(5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

(5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree) *

- 5
- 4
- 3
- 2
- 1

19. Yrityksillä tulisi olla selkeät, muista arvoista ja tavoitteista erilliset ympäristöarvot ja -tavoitteet.

Companies should have distinct environmental values and goals that are separate from other values and goals.

(5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

(5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree) *

- 5
- 4
- 3
- 2
- 1

20. Mikä seuraavista on mielestäsi yritysten olennaisin ympäristöteko?

What of the following is the best way companies can improve the environmental sustainability of their operations? *

- Uusiutuvan energian käyttäminen // Using renewable energy
- Kierrättäminen ja kierrätettävien materiaalien käyttö // Recycling and using recycled materials
- Tuotteiden kestävyyden parantaminen // Improving product life-time
- Päästöjen kompensointi // Carbon offsetting
- Tuotannon sijoittaminen lähelle markkina-aluetta // Locating production close to the market
- Muu

21. Minkä tekijän tulisi ensisijaisesti vaikuttaa siihen, kuinka yritykset huomioivat ympäristönäkökulmat toiminnassaan?

What should be the most important factor driving companies to improve their environmental sustainability? *

- Lainsäädäntö // Legislation
- Yhteiskunnallinen paine // Pressure from the society
- Taloudelliset hyödyt // Financial benefits
- Yhteiskunnallinen vastuu // Social responsibility
- Muu

22. Yritysten teot ja puheet liittyen ympäristöasioihin EIVÄT kohtaa.

    Companies' actions regarding environmental matters are NOT aligned with their public disclosures.

    (5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

    (5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree) *

    - ○ 5
    - ○ 4
    - ○ 3
    - ○ 2
    - ○ 1

23. Globaalit kriisit, kuten sota, energiakriisi, ruokakriisi ja korkea inflaatio vähentävät ympäristöasioiden tärkeyttä.

    Global crises, such as war, energy crisis, food crisis and high inflation make environmental questions less important.

    (5=Täysin samaa mieltä / 4=Jokseenkin samaa mieltä / 3=Ei samaa eikä eri mieltä / 2=Jokseenkin eri mieltä / 1=Täysin eri mieltä)

    (5=Fully agree / 4=Somewhat agree / 3=No opinion / 2=Somewhat disagree/ 1=Totally disagree) *

    - ○ 5
    - ○ 4
    - ○ 3
    - ○ 2
    - ○ 1