

**LAPPEENRANTA UNIVERSITY OF TECHNOLOGY**  
LUT School of Business and Management  
Master's Degree Programme in Strategy, Innovation and Sustainability

*Elina Innanen*

**FUTURE CONSUMERS' PERCEPTIONS OF SUSTAINABILITY, AND THEIR  
REFLECTIONS ON BUYING DECISIONS**

1<sup>st</sup> Supervisor: Professor Satu Pätäri  
2<sup>nd</sup> Supervisor: Professor Ari Jantunen

## **ABSTRACT**

**Author:** Elina Innanen  
**Title of Thesis:** Future consumers' perceptions of sustainability, and their reflections on buying decisions  
**Faculty:** School of Business and Management  
**Master's Programme:** Strategy, Innovation and Sustainability  
**Year:** 2016  
**Master's Thesis:** Lappeenranta University of Technology  
85 pages, 3 figures, 23 tables, 1 appendix  
**Examiners:** Professor Satu Pätäri  
Professor Ari Jantunen  
**Keywords:** sustainability, consumers' perception, buying decisions, forest industry

The purpose of this quantitative study is to study future consumers' perception of sustainability in relation to business in general and specifically concerning the forest industry. The aim is to understand, what they feel is important for sustainable business and how the forest industry, in their opinion, is performing in this respect. Further, it aims to study how these perceptions reflect in their buying decisions.

The research was conducted by a quantitative survey in two countries, Finland and Hong Kong, in the spring of 2015. All data used in the research is primary.

The result indicate that consumers see sustainability issues important today and in the future. Sustainability is seen important both for business in general for the forest industry. The industry is considered sustainable now, but room for improvements exists. The appreciation of sustainability does not reflect to buying decisions, however. The buying of ecological products seems to be more up to chance than to intention. Consumers are not proactive in searching for more ecological or responsible options. Information needs to be taken to them. Ecologicalness as such is still not a strong selling point.

## TIIVISTELMÄ

<b>Tekijä:</b>	Elina Innanen
<b>Opinnäytteen nimi:</b>	Tulevaisuuden kuluttajien näkemykset kestävästä kehityksestä ja niiden heijastuminen ostopäätöksiin
<b>Tiedekunta:</b>	Kauppätieteiden koulutusohjelma
<b>Pääaine:</b>	Strategy, Innovation and Sustainability
<b>Valmistumisvuosi:</b>	2016
<b>Pro gradu –tutkielma:</b>	Lappeenrannan teknillinen yliopisto 85 sivua, 3 kuvaa, 23 taulukkoa, 1 liite
<b>Tarkastajat:</b>	Professori Satu Pätäri Professori Ari Jantunen
<b>Hakusanat:</b>	kestävä kehitys, kuluttajan näkökulma, ostopäätökset, metsäteollisuus

Tämän kvantitatiivisen tutkimuksen tarkoituksena on tutkia tulevaisuuden kuluttajien käsitystä kestävästä kehityksestä liittyen liiketoimintaan yleisesti sekä erityisesti metsäteollisuuden alaan. Päämääränä on ymmärtää, mitä he pitävät tärkeänä liiketoiminnan kestävyteen liittyen ja erityisesti kuinka metsäteollisuus suoriutuu suhteessa kestävyteen. Edelleen tavoitteena on tutkia kuinka nämä käsitykset näkyvät ostopäätöksissä.

Tutkimus tehtiin kvantitatiivisen kyselyn avulla kahdessa maassa, Suomessa ja Hong Kongissa. Kaikki tutkimuksessa käytetty data on primaaria.

Tuloksista ilmenee, että kuluttajat pitävät kestävästä kehityksestä tärkeänä nyt ja tulevaisuudessa. Kestävyys nähdään tärkeänä sekä liiketoiminnassa yleisesti että metsäalalla. Kestävyden parantamiselle nähdään myös tarvetta metsäalalla. Kestävän kehityksen arvostus ei kuitenkaan näy välittyvän ostopäätöksiin. Ekologisten tuotteiden ostaminen näyttää riippuvan enemmän sattumasta kuin aikomuksesta. Kuluttajat eivät ole proaktiivisia ekologisten tai vastuullisten vaihtoehtojen etsimisessä. Tieto täytyy viedä heille. Ekologisuus sinänsä ei edelleenkään ole vahva myyntiargumentti.

## ACKNOWLEDGEMENTS

If you are reading this, it means I have proven myself wrong. I have accomplished something I never thought I could. I was sure I would not have the patience perseverance to sit down and write something as enormous as a thesis would be. It has not been an easy process. It has driven me insane. Multiple times, I have had to convince myself that I can and will do this. I have kicked myself for saying 'yes' to conducting a quantitative study – something which I have never done before. Surely, there would have been an easier way!

Yet, here we are. Looking back, this process has been perhaps the most educating time of my studies. Not only have I gotten to know a topic new to me, more importantly, I have learned to cope with not knowing and understanding everything. I have learned to tolerate being completely lost without having the faintest clue which way to turn. I have learned that waiting for the right timing only takes it further away from you. That fearing the unknown is a waste of energy for as soon as you dare to learn, your fears diminish.

I did not get here alone, however. I would like to thank my supervisor, Professor Satu Pätäri, for guiding and advising me when I was lost but never forcing me to make a turn. Thank you for not pushing me when I was not ready to act but encouraging and supporting me when I needed reassurance. In addition, I want to thank Professor Timo Pihkala for showing me the robes of quantitative analysis – words are not enough. Next, a humongous thank you to my partner in crime, Clara Wong, who always saw light where I did not – being lost together made it so much less scary.

Last, I want to thank my family and friends for relentlessly supporting me and cheering me on. I am so thankful for having you all in my life! A special thanks to my mother, Sari, who always offered help and to my significant other, Henri, who coped with me not being the easiest person to be with and always believed in me regardless of whether I did.

In the words of Winnie-the-Pooh, A.A. Milne

*Rivers know this: there is no hurry. We shall get there some day.*

Lahti 7.7.2016

Elina Innanen

# Table of Contents

1	INTRODUCTION .....	1
1.1	Background.....	1
1.2	Framework of the thesis.....	3
1.3	Research questions and objectives .....	5
1.4	Research method and data.....	7
1.5	Delimitations .....	8
1.6	The structure of the thesis.....	9
2	CORPORATE SOCIAL RESPONSIBILITY.....	11
2.1	What is CSR? .....	11
2.2	Consumers' perceptions of CSR.....	13
2.3	CSR in the forest industry .....	16
2.4	Consumers' perceptions of CSR in the forest industry.....	18
3	CONSUMER BEHAVIOR AND SUSTAINABILITY .....	20
3.1	Consumer behavior.....	20
3.2	Who is the consumer? .....	21
3.3	Consumers and sustainability .....	22
3.4	Factors affecting responsible buying decisions.....	24
4	EMPIRICAL ANALYSIS OF FUTURE CONSUMERS' SUSTAINABILITY PERCEPTIONS .....	32
4.1	Research framework and method.....	32
4.2	Data collection .....	34
4.3	Data description and analysis .....	36
4.4	Results.....	40
4.4.1	The role of sustainability in buying decisions.....	40
4.4.2	Views of sustainability in general and in the forest industry .....	54
4.4.3	Views of ecological forest-based products.....	66

4.5 Summary of the results .....	70
4.5.1 The role of sustainability in buying decisions .....	70
4.5.2 Views of sustainability in general and in the forest industry .....	73
4.5.3 Views of ecological forest-based products.....	75
5 CONCLUSIONS AND DISCUSSIONS .....	77
5.1 Discussion of the results .....	77
5.2 Reliability and validity of the study an future research ideas.....	82
REFERENCES.....	86

## APPENDICES

### APPENDIX 1: The questionnaire

## **List of Figures**

Figure 1 The framework of the thesis.....	4
Figure 2 The questions of consumer behavior research .....	9
Figure 3 The four dimensions of corporate social responsibility.....	13

## **List of Tables**

Table 1 Central studies used in this research. ....	25
Table 2 Description of the respondents.....	37
Table 3 “I buy ecological products” .....	41
Table 4 Factor Analysis – S2Q5.....	42
Table 5 Please indicate the degree to which you think the following aspects of a product are important. ....	43
Table 6 One-Way ANOVA S2Q5 .....	44
Table 7 How well do the following statements describe your buying behavior. .	45
Table 8 One-Way ANOVA S2Q3 .....	46
Table 9 How well the following statements describe your buying behaviour. ....	48
Table 10 One-Way ANOVA S4Q3 .....	50
Table 11 Please rate the following statements.....	52
Table 12 One-Way ANOVA S4Q4 .....	53
Table 13 When thinking of how business is related to sustainable development, how critical are the following issues in your opinion? .....	54
Table 14 One-Way ANOVA S3Q4 .....	55

Table 15 When you think of forest-based business (e.g. logging and paper pulping), how important are these sustainability issues in your opinion? .....	57
Table 16 One-Way ANOVA S5Q1 .....	58
Table 17 Please asses the following statements.....	59
Table 18 One-Way ANOVA S5Q2 .....	60
Table 19 Please answer these questions based on the knowledge, belief, or image that you have of forest industry. ....	62
Table 20 One-Way ANOVA S5Q3 .....	63
Table 21 Factor Analysis S6Q1.....	67
Table 22 Please indicate the degree to which you agree with the following statements about the specific product category. ....	68
Table 23 One-Way ANOVA S6Q1 .....	69



# **1 INTRODUCTION**

This thesis studies consumers' perceptions of sustainability in the business context. More precisely, it looks into these perceptions in the context of forest industry and studies how sustainability affects consumers' buying decisions. This introductory chapter discusses the background of the topic and introduces the research framework. Further, it introduces the research questions and objectives and discusses the methodology and data of the study. It also explains the delimitations of the study and the structure of the thesis.

## **1.1 Background**

Companies are in a large role in building a well-functioning and equal society (Prasad et al. 1998, 224). Nowadays companies are seen more and more as the source of problems within our society, however. A common view is that if a company succeeds it comes at the expense of the community and environment within which it acts. The more companies try to engage in responsibility issues the more they are blamed when something bad happens. The companies themselves are partly to blame here. The focus is still too much on the immediate and temporary profitability rather than wider influences of actions that hinder or make possible the continuing success. Business has failed to concentrate on the welfare of consumers. (Porter & Kramer 2011, 64) The most vital question to business according to Porter and Kramer (2011, 67) is "Is our product good for our customers?".

Sustainability and responsibility issues have the highest meaning in those industries that take their raw materials straight from the environment such as mining, oil and the forest industry (Ranängen & Zobel, 2014, 299). The forest industry has an especially great opportunity in succeeding as an all-around sustainable industry because it is based on a renewable source of raw material (Husgafvel et al. 2013, 2; Sharma & Henriques, 2005, 159-160).

The paybacks of sustainability engagements for companies are diverse. Striving towards better sustainability can improve the future efficiency of the company through

rationalizing the use of materials, energy and other resources. One of the benefits is also the improvement of the company's image in consumers' eyes. It is clear that ecological and social sustainability and responsible business concepts are shaping the future of business. Competitive advantages are to be gained from being agile and adjusting to these new demands and making them a core part of functions. (Husgafvel et al. 2013, 1-2)

The push towards sustainability can also come from the company's shareholders or stakeholders, such as customers (Husgafvel et al. 2013, 3). The significance of these issues is clear to the majority of people and most feel that companies should engage in sustainability actions. However, the public's awareness of companies' corporate social responsibility or in short CSR activities and efforts is quite low. Many think that only a small part of companies take action towards being more responsible. (Schmeltz 2011, 39)

Because sustainability in the business context and companies' efforts towards more responsible business seem to be somewhat unknown to the public it is very interesting to study whether these issues play a role in the buying decisions of individuals. In the last decade, it was found that although sustainability issues were widely discussed and consumers often claimed they cared about the environment or other ethical matters not many took actual measures to engage by decreasing their carbon footprints for example. The reasons before have been simple. First, the lack of interest towards buying ethical products was due to companies failing to show consumers what makes them valid and good options. Second, companies had not been considering consumers' desires when designing ethical products. (Bonini & Oppenheim 2008, 56) This study scopes the current feelings and opinions consumers have towards buying for example ecological products to find if the situation has changed and whether the fact that traditional consumers often do not think their individual buying decisions can have an effect on the environment still prevents responsible buying (Gleim 2013, 46).

Consumers can be grouped based on what sort of things they look for in the products they buy (Schiffman & Kanuk 1983, 32-33). One of the groups could be those consumers who look for the ecological options. Already in the 1970's it was stated that

the amount of consumers concerned in green issues is vast enough that companies should not ignore it (Kinnear et al. 1974, 23) and although the green product market is still small, it has opportunity for vast growth (Bonini & Oppenheim 2008, 61).

Webster (1975, 188) defined the social consumer already in the 1970's as an individual who takes into consideration the societal repercussions of his or her buying. Even further, they will try to make a difference and change the society through their buying. (Webster 1975, 188; Mohr et al. 2001, 47; Gleim et al. 2013, 45) They feel their purchasing decisions are important and have an impact on the environment as well as the company whose products they buy or do not buy. They see their decisions as either a reward or a penalty for the company. Some of them even see themselves as important influencers who should monitor what companies are doing and push them into moving towards practices that are more responsible. (Mohr et al. 2001, 47, 67) Therefore, they are actively looking for products that are good for the community (Mohr et al. 2001, 47; Gleim et al. 2013, 45) and are enthusiastic about sharing and receiving information about them (Shrum et al. 1995, 80).

Rather than finding and defining this group, however, this study aims to find out what ideas and opinions consumers have about sustainability issues in the business context in general. More precisely, how do they feel about sustainability in forest industry today, and where do they see these issues in the industry are going or should go. In addition, the goal is to map the role of sustainability issues in their buying decisions. The mindset of the study is in the future. The goal is to get an idea of what kind of a role sustainability will play in buying decisions of the future consumers. For this reason, the sample of the study consists of future consumers i.e. students.

## **1.2 Framework of the thesis**

Figure 1 displays the three contexts this work builds around: sustainable business, consumer behavior, and forest industry. All of the contexts as such are very large. Therefore, the study does not concentrate on any of these issues as a whole but rather looks at how they are linked with each other.

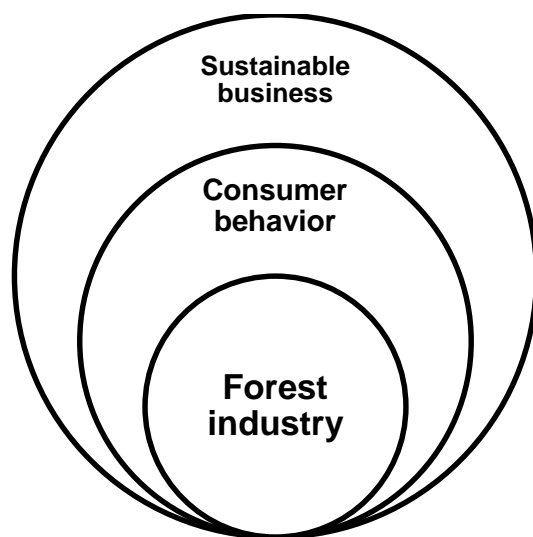


Figure 1 The framework of the thesis

Sustainable business is the vast concept under which the study is built. What it means in different markets and industries and for different companies may vary. This work will not concentrate on what companies should or could do to be sustainable and responsible. Rather it looks at the perceptions and opinions of one of the stakeholder groups i.e. consumers. Consumer behavior has a role to play in companies' sustainability efforts. In fact, it may be consumer demand that pushes the company to increase its efforts towards being more sustainable (Husgafvel et al. 2013, 3).

Again, consumer behavior is not studied as a whole in this research but looked at from the view point of sustainability. In other words, the study is interested in the role sustainability plays in buying. The aim of the research is to understand how consumers understand and see the sustainability efforts of companies and how their feelings and opinions of these issues reflect to their buying decisions. Is ecologicalness, for example, a factor when decisions are being made? Further, should something be improved or changed to better match consumers' needs, wants and demands or are they satisfied with the options they have?

Narrowing even more down, the study takes a closer look at buying decisions related to a specific industry i.e. forest industry. Forest industry and its products play a key role in sustainability. Because the industry is based on a renewable source of raw material, it is highly capable of being an all-around sustainable industry. Thus, it may set an

example in utilizing innovative and progressive sustainability practices. (Sharma & Henriques, 2005, 159-160) This role is viewed from consumers' point of view to understand how they see it overall and how it affects their buying decisions. This study aims to understand how satisfied consumers are with the sustainability of the industry currently and what they see should be improved in the future. Further, it aims to scope the role sustainability factors play when consumers make decisions to buy products of the industry.

The actual buying behavior will not be studied, however. Thus, the findings will tell only about how consumers view these issues in theory and what they value but not about what they actually buy. In order to find out the reality of buying behavior further research is needed.

The research will contribute to the research project "Forescof – Searching for Sustainable and Competitive Future for the Forest Sector". It will also contribute to research of consumer behavior and sustainable buying. The topic is important for the forest industry because it helps in scouting for viable business directions for the future. It helps in understanding what consumers are looking for from the forest-based products, how they see the industry performing in regards to sustainability, and whether they see these issues valuable and important for the industry. This helps in ensuring the industry is competitive in the future.

### **1.3 Research questions and objectives**

Consumer studies can be general, aiming to define and understand buying. They can also aim to identify the likely user of a specific product. (Schiffman & Kanuk 1983, 32) This thesis will look at the role sustainability plays in consumers' buying decisions and thus can be seen as a combination of these. It looks at what types of sustainability factors consumers consider, thus aiming to understand buying in relation to sustainability. In addition, it will analyze whether the background and the socio-demographic attributes of the consumers' have an effect on the views and opinions towards sustainability thus aiming to identify factors that may influence sustainable buying.

The main question that this research is trying to answer is:

What, if any, role does sustainability have in the future consumers' buying decisions?

This study studies the mindsets, opinions and viewpoints of students. Today's students will be tomorrow's consumers (Prasad et al. 1998, 221). Thus, rather than merely trying to understand the state of things today, the aim is to look to the future. The idea of the study is to get a basic understanding of how sustainability issues relate to buying in the future. To achieve this questions such as do consumers consider the sustainability of the products they buy, do they search for information, are they aware of alternatives etc. are asked.

The sub-questions of this main question are:

1. How do consumers view sustainability in general and in the forest industry specifically today and in the future? This question looks to the understanding consumers have of sustainability. What aspects do they consider important for sustainable business and more precisely what do they wish would improve? More specifically, what issues are important in the forest industry and how is it viewed in terms of sustainability as it is.
2. How do consumers view ecological forest-based products? This question focuses specifically on forest-based products with the aim of understanding how consumers view the ecological options of this product group. Do they feel there are options available, what is the price and quality of these products like compared to their alternatives etc. The concept of forest-based products is vast. This study uses paper products and wooden furniture as examples of forest-based products as they are everyday products that the respondents are likely to know.

## 1.4 Research method and data

The research is conducted quantitatively. A survey was chosen as the research method because it is an easy and time-efficient manner of gathering data from multiple respondents. Further, using a survey instead of for example interviews ensures that the questions are the same for all responses and minimizes the researchers' influence on the answers. Data analysis of mostly numeric data is also easier and there is less room for wrong interpretations.

The survey was formed and the data collected in co-operation with Hoi Ki Wong who also uses it for her research. The survey consists of 11 background questions and 22 actual questions which are divided in six sections. There are both multiple choice numeric questions and open ended questions where the responded is given a chance to state their opinion in their own words.

The six question categories of the survey are General consumer behavior, Sustainability in general, Consumption of ecological products, Eco-labels, Forestry sustainability, and Consumption of forestry products. Out of these six categories, this study uses five. The Eco-Labels part of the survey is not used in this study but was designed for the other study, which also uses the same survey. The focus of this study is on analyzing the answers of the third and the last part of the study i.e. Consumption of ecological products, and Consumption of forestry products. Data from the other three sections supports and compliments the main aim of the study and helps in building a more holistic understanding of the topic. It is noteworthy that even though the sections in the survey use the word "Consumption", the actual questions concern buying. The error made in the naming of sections does not affect the results of the study.

The focus group of the study are university students in three universities in Finland and ten universities in Hong Kong. When trying to map and understand the future of responsible business, students' views and opinions are an interesting and valuable start point (Panwar et al. 2010, 18). Further, it has been very common for a long time to study students' ideas and perceptions when trying to portray and understand the

ethics related issues. Today's students will be tomorrow's leaders and managers. They build the future of ethics in business. (Prasad et al. 1998, 221) For this reason, students are commonly used as a focus group in ethics related studies with the aim of understanding the future.

On the other hand, today's students are also tomorrow's consumers and consumers who will set the demand level for ethics and responsibilities in business. Thus, the student body of today greatly defines the future of corporate responsibility on from both sides. Therefore, studying students helps in portraying the future of business. (Amberla et al. 2011, 485) More specifically, students' views and understanding of the forest industry and its sustainability are studied to better understand the future of this particular industry (e.g. Amberla et al. 2011, 476, Panwar 2010, 18). This study continues on this path and studies the future consumers of forest products to get an idea of what is required from the industry.

## **1.5 Delimitations**

This research will look at buying from the point of view of consumers themselves rather than from the view of companies' sales reports or market evaluations. Further, it aims to scope and understand how consumers perceive their buying decisions rather than look at the actual buying itself. A specific look is taken at the buying of forest products. Again, the nature of the study allows looking into how consumers feel and what they prefer, not the actual actions they make. Thus, the study will look at merely the opinions, preferences and evaluations of the consumers instead of the actual purchases. There are two types of consumers, private and organizational (Schiffman & Kanuk 1983, 7). This research focuses on the private consumers and excludes organizational ones completely.

As explained before, this research does not aim in providing a holistic view of consumers' behavior. As shown in figure 2, the general goals of consumer behavior research are in answering questions of what consumers buy, why they buy, where they buy, how they buy, when they buy, and how often they buy. (Schiffman & Kanuk 1983, 6) As highlighted in the figure, this study is limited in aiming to answer the first two



questions i.e. what and why consumers buy. More specifically, the “what”-part looks at whether consumers buy ecological or sustainable products. Is the ecological product and option to the future consumers? Is it considered always, sometimes or never? The “why”-part looks at which product factors are important to consumers when buying. Why do they choose the options they choose? Is the weighing factor price, quality or something else? How do ecologicalness and sustainability factors play in? Or do they?

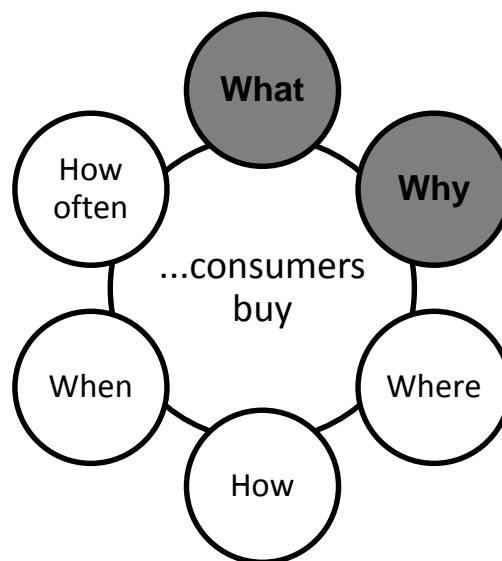


Figure 2 The questions of consumer behavior research (Modified from Schiffman & Kanuk 1983, 6)

Although consumers will be looked at as individuals, this study does not take into consideration the individual’s personality or complex lifestyle choices. Instead, the effect of basic socio-demographic attributes, such as gender and the country where the respondent lives are analyzed to determine whether these have any explaining power in how consumers view sustainability and their views reflect in their buying decisions.

## 1.6 The structure of the thesis

This thesis consists of five chapters. This first chapter is the introduction of the thesis. It shortly explains the background of the thesis and justifies its importance. In the introduction, the framework and methods of the research as well as the research questions are also introduced.

The next two chapters form the theoretical part, and thus the literature review of the study. First, the second chapter looks at the concepts of sustainability and CSR in general and from the point of view of consumers. This is first done in general business context and then in the narrower context of forest industry. Second, the third chapter introduces the concept of consumer as understood in this study and discusses the relation of sustainability and buying.

The fourth chapter of the thesis consists of the empirical part of the study. It introduces the research in detail. The framework, research method and data collection are discussed. Further, the collected data is described and the analyses gone through in detail. Finally, the results of the analyses are summarized.

The last chapter, chapter six, concludes and discusses the whole thesis. The results are discussed to give final answers to the research questions. Finally, the validity and reliability of the study are assessed and discussed and some suggestions for future research are given.

## **2 CORPORATE SOCIAL RESPONSIBILITY**

This chapter explains and discusses the term CSR. Further, it reviews previous research on how consumers perceive CSR. First, this is done in a wider context. Second, CSR in the narrower, forest industry, context is introduced shortly before conversing consumers' perceptions on this narrower topic.

### **2.1 What is CSR?**

Businesses have an influence on their environment throughout the course of their actions i.e. through their use of energy and materials, through the emissions they produce, and through how their products are used and disposed of (The World Commission on Environment and Development 1987, 175). Sustainability is one of the key elements of successful business and creates advantage against competitors (Husgafvel et al. 2013, 8). Therefore, companies should take a key role in shaping the business environment into a more environmentally friendly one and in guiding their consumers towards more ethical buying (Bonini & Oppenheim 2008, 61; Devinney et al. 2012, 230). This not only helps in gaining advantage against competitors in their market but also in achieving better positioning against possible new regulations (Bonini & Oppenheim 2008, 61).

The successfulness of business and the wellbeing of a society are interweaved. A functioning society provides a company the demand and surroundings it needs in order to be profitable. The society on the other hand needs profitable companies to act as employers and to bring about prosperity. One view is that ultimately markets are determined by social rather than economic wants and desires. The value that is created through responsible business is both financial and social in nature. Thus, by acting responsibly and developing their sustainability efforts companies increase the ultimate quantity of value rather than rearrange the distribution of the existing value. (Porter & Kramer 2011, 65-66)

The sustainability efforts and goals of a company can be put under the term of CSR. The term is not simple but rather a complex mixture of ideas and opinions that are

shaped by the environment, community and industry in which the company operates. Thus, it is not a “one size fits all” –fix that each company can put to practice as such but more a vast framework that covers various aspects that the company can utilize. (Vidal & Kozak, 2008, 59) This is not a novel idea. Already in the early 1990’s Elkington et al. (1991, 13-14) discussed a “green perspective” that multiple businesses were adopting. It was not about choosing between being profitable and being ecological. The key was to incorporate both values into the core business and find a middle road in between them. Even prior this, in the 1960’s Davis (75-76) urged businesses to consider not only their economic but also their social responsibilities to the community. He claimed those who choose the road of not being responsible would eventually become unsuccessful.

CSR can be defined broadly as the independent actions a company takes to further social and environmental wellbeing. Independent here means that companies are not obligated to take these actions by laws or regulations that are set by external actors, but that they stem from the companies’ own willingness act sustainably. (van Marrewijk 2003, 102) Thus, the aims of social responsibility should be holistically integrated in the company’s core business and be visible in its mission and vision. Taking a holistic view of acting responsibly ultimately benefits the company itself as well as its surroundings. (Mujtaba & Cavico 2013, 66)

It is important to understand that CSR is not equivalent charity. Neither should it be seen as something extra to the core business of the company but rather as a vital and central element of the company’s strategy. (Mujtaba & Cavico 2013, 69; Porter & Kramer 2011, 64) To bring about true change in the environment and the society around it the company should act as a business not as a benefactor of its surroundings. In other words, companies should not put acting responsibly ahead of their core business but rather incorporate responsibility adjustments to improve their core business. (Porter & Kramer 2011, 64) It can also be argued that only a sustainable business can be truly successful in the long run.

Figure 3 portrays Carroll’s (1979, 499) categories of the social responsibilities of a company as economic, legal, ethical and discretionary. These do not exclude each

other but may exist as primary. They form a hierarchy where economic responsibility is the highest for any business and the rest follow.

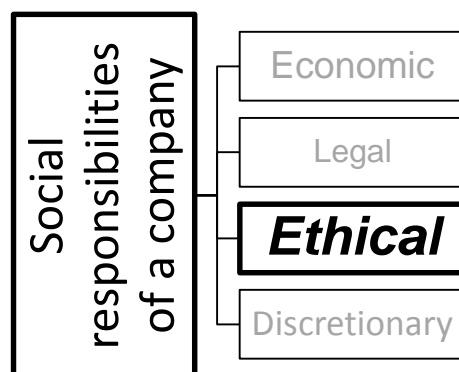


Figure 3 The four dimensions of corporate social responsibility (Carroll, 1979, 499)

Along the lines of Carroll, Mujtaba and Cavico (2013, 68) have later argued that the increased success of the company is based on four factors, which build upon each other: economic, legal, ethical and social responsibility. First, the company has to be profitable. Second, the profitability must be achieved without breaking any laws that are relevant to the business – national or international. Third, the company must act morally and in accordance to its values and the promises it has made even where there is no law that demands it. Last, companies must take into consideration the communities within which they act and incorporate benevolent and humanitarian activities in its corporate strategy. This study concentrates on the ethical dimension of CSR solely, which is seen here as covering both environmental and social aspects. Overall, the focus of sustainability studies related to the forest industry is mostly on the environment and ecological issues (Ranängen & Zobel, 2014, 309) but this study aims to scope the consumers' understanding of social issues as well.

## 2.2 Consumers' perceptions of CSR

Although it is commonly viewed that sustainability issues and responsible business are important, individuals do not feel they notice these issues in their daily life. It is common to think a company's CSR performance is one of the key parts of its image. However, it is not nearly as common for an individual to be able to name a company that they know is active in these issues. Thus, it seems that there is lack of information from the

company to the public. Even further, research shows that this information should be so easily available that the receiver does not have to seek for it. (Schmeltz 2011, 39-40)

It is widely known and loudly pronounced that the environment is suffering in many places. Even so, multiple studies have found that students value other aspects of CSR higher than the environmental aspect and in fact, environmental sustainability is last on their list of importance (Alonso-Almeida et al. 2015, 8; Lämsä et al. 2008, 54). They put more value on acting responsibly towards people, thus for example the employees and customers of a company. (Alonso-Almeida et al. 2015, 8-9)

Especially among young people, it is common to put more value on those responsibility issues that are closer to the individual themselves. For example, concerns towards the wellbeing and fair treatment of employees and protection of nature in one's home country often raise above natural catastrophes on the other side of the world. Both physical and emotional closeness matter when individuals evaluate the importance of specific responsibility issues. (Schmeltz 2011, 40)

In cases when a consumer particularly cares about the specific CSR activities the company is taking part in, they are likely to get attached to the company because this helps them feel better about themselves and in building their identity as ethical consumers (Bhattacharya & Sen 2004, 15). Still, it would be naïve to assume that merely doing "good things" is enough to attract consumers. The companies' corporate responsibility actions are not relevant for most consumers and the basing of purchasing decisions on a company's CSR activities is irregular. Consumers do not search for information on how thoroughly a company is participating in these activities. (Mohr 2001, 67-68)

Consumers may even react negatively in a company's CSR activities if they perceive them as taken away from the core business and thus for example decreasing the quality of products (Bhattacharya & Sen 2004, 23). For example, consumers do not necessarily appreciate companies engaging in charity work (Bird et al. 2007, 203). Part of consumers' suspicions are explained by lack of knowledge and awareness about these issues in general and the difficulty in gaining it (Mohr 2001, 67-68).

Negative publicity concerning CSR issues also gets consumers' attention easier and has more effect on their behavior than positive. Therefore, companies need to pay extra attention on avoiding negative publicity. However, even in cases when consumers' attitudes towards companies are positively influenced by CSR activities this does not necessarily translate into them purchasing products from does companies. (Bhattacharya & Sen 2004, 23)

When attracting consumers, marketing the ethicality and responsibility of their actions is worthwhile for companies (Maignan, 2001, 69). However, when it comes to evaluating companies' responsibilities differences have been found between consumers from different cultural backgrounds. For example, in Central Europe (more specifically France and Germany) and the U.S. consumers use different criteria in evaluating the "goodness" of a company. When choosing a company to purchase from the U.S. consumers appreciate the financial accountabilities of the company higher than their Mid-European counterparts do. The Europeans, on the other hand, put more emphasis on the legality and ethicality of a company's actions and are more likely to support a company that behaves socially sustainably than the U.S. consumers. (Maignan, 2001, 57, 60, 69)

The European consumers put bigger weight on companies acting justly and socially responsibly, and engaging in charity than their U.S. counterparts do. Even further, European consumers may see good financial performance as an indicator of poor social responsibility. On contrary, in the United States a company may be unvalued by consumers if it expresses to be responsible but does not show strong financial numbers. (Maignan, 2001, 70)

Because the CSR efforts of a firm will ultimately most likely affect the price, the consumer has to pay for a product it is very important to understand what the consumer is willing to pay for. (Devinney et al. 2012, 229-231) Identifying and eliminating the hurdles between consumers and ethical products is profitable for companies. It brings success to the company through sales growth. (Bonini & Oppenheim 2008, 61)

The costs can also relate to the time spend for getting information about environmental issues and evaluating the goodness of products in relation to them. One of the obstacles to buying ecological products may also be consumers' faithfulness to non-ethical products. (Gleim 2013, 46)

### **2.3 CSR in the forest industry**

The sustainability and responsible business and governance of companies is a global topic today. The presence of these issues is especially important in the forest industry as it extracts its raw material straight out of the environment. In addition, the manufacturing methods of the industry require a lot of energy and carry a risk of possible environmental harms. (Amberla et al. 2011, 472) Another reason why the industry draws special attention in relation to responsibility issues is that forests are commonly highly valued and honored by people. The industry is not oblivious to the expectations of the society. (Panwar et al. 2006, 8) Improvement in the sustainability and corporate responsibility actions has been visible in for years. (Amberla et al. 2011, 472) Looking at the company websites of forest companies, sustainability issues and responsible management are often visible. For example, International Paper, Stora Enso and UPM, which are listed in the top 6 in PwC's Global Forest, Paper & Packaging Industry Survey's (2016, 10) "Top 100 Global Forest, Paper & Packaging Industry Companies" have clear sections for these topics on their sites (International Paper 2016, Stora Enso 2016, UPM 2016). This indicates the importance of these matters in the forest product industry (Husgafvel et al. 2013, 3).

The sustainability thinking is no longer evolving only around basic issues such as controlling emissions. In a study conducted on the Canadian forest industry it was found that both the stakeholders and companies of the industry have a wider outlook on sustainability, and are looking at material recycling issues and restructuring processes. (Sharma & Henriques, 2005, 159) Still, it is argued that the industry is stiff in making changes and adapting to the outside world. Only a few pioneering companies make fundamental changes on a system level whereas most concentrate on innovating on a process level. (Panwar et al. 2012, 426). In sustainability thinking the industry has evolved from its infancy where concerns were only in emission control and waste



issues. However, in this respect too individual companies are still taking baby steps and have not truly moved far from this stage. This is quite natural, as fundamental changes require large investments and clear motivators. These changes are not regulated and undergoing them is voluntary which slows down the process, as companies have to weigh the pros and cons carefully before taking action. (Sharma & Henriques, 2005, 174)

Still, Husgafvel et al. (2013, 3) argue that in Finnish forest product companies the true value of overall sustainability thinking is currently not understood well enough by the management. Economic improvement could be made in incorporating a holistic sustainability mindset in these companies. After the 1990s, there has not been much development in sustainability thinking in the forest products industry. Most improvements back then related to controlling pollutions and no drastic changes on that field have happened after either. Therefore, there is a need for a push towards more holistic sustainability thinking. Research on recycling leftover materials and remains, for example, already exists. (Husgafvel et al. 2013, 3, 9) Consumers' demand has a positive impact on these material recycling practices. In other words, when consumers indicate demand for recycling of materials companies are more likely to take action in achieving better practices in this field. (Sharma & Henriques, 2005, 172)

The stakeholders of a company can have an effect on how responsibly the company acts in other situations as well. However, this is not always the case. For example, it has been found that the stakeholders of a company have no effect on the utilization of eco-efficient practices in the forest industry. Thus, whether stakeholders try to push the company towards being more eco-efficient or not, has no influence on the decisions being made. (Sharma & Henriques, 2005, 172)

The results of stakeholders influence on companies' willingness to engage in eco-design practices are contradictory. Stakeholders' actions seem to both encourage and discourage companies to engage in eco-design activities. More precisely, stakeholders expressing dissatisfaction with the sustainability level of a company's actions positively affects the likelihood that the company engages in eco-design activities. Similarly, consumers expressing want to buy certified products encourages companies to

increase eco-design activities. On the contrary, consumers' demands on more information on the sustainability of products affected the activeness in eco-design negatively. Similarly, consumers' demands on certified products affected the likelihood of a company engaging in sustainable harvesting negatively, although certification as such had a positive effect on the same matter. (Sharma & Henriques, 2005, 172)

## **2.4 Consumers' perceptions of CSR in the forest industry**

A study on Chinese forest industry found that the viewpoint always matters in defining the perception of CSR issues in the industry. This means that when it comes to assessing how well the industry is doing the subjective values and the position of the viewer plays an important part. Consumers perceive that the industry is doing well in regards to CSR because they industry sees them valuable and thus pays attention to them. (Wang et al. 2013, 140) On the other hand, consumers are not highly aware of CSR issues in the forest industry context and their knowledge should be increased (Zhen & Aguilar 2014, 103).

Overall, consumers perceive that the improving of legal and ethical responsibilities is more important than economic responsibilities in the forest industry. The profitability of companies is expected to be a given whereas ethicality is something that should be continuously pursued. However, consumers do not necessarily show support or appreciation for good CSR performance by buying. (Zhen & Aguilar 2014, 103)

As this study does, a couple prior studies concentrating specifically on corporate responsibility in the forest industry have as well used students as a sample (e.g. Amberla et al. 2011, 476, Panwar 2010, 18). The findings indicate that students do not see economic success and sustainability as either-or factors that exclude each other (Panwar et al. 2010, 29). Further, students seem to believe the forest industry is meeting its financial goals and responsibilities but do not think it meets the ecological responsibilities and goals as thoroughly. More specifically, problems are seen in taking care of and sustaining biodiversity and forests that are not used for business. (Amberla et al. 2011, 480)

As was visible in studies that concerned individuals' views on sustainability in general, there are also some differences in the views of males and females when it comes to sustainability in the forest industry. Although male and female students have similar views in the forest industry being economically sustainable, female students much more critical towards it fulfilling other sustainability goals i.e. ecological and social ones. In addition, women are more skeptical towards forest industry fulfilling its socio-ecological responsibilities than men are. (Panwar et al. 2010, 26, 28) Thus, women have stricter views than men do about sustainability in the forest industry.

The cultural background has also been found to have an effect on the individual's views on forest sustainability. U.S. students are more skeptical than Finnish students are towards the forest industry fulfilling both its financial and ecological responsibilities. On the contrary, they see that the industry fulfills its social responsibilities better than Finnish students do. Overall, the opinions of students vary more with regard to the ecological responsibilities being met than they do with regard to social and financial responsibilities. (Amberla et al. 2011, 481)

### **3 CONSUMER BEHAVIOR AND SUSTAINABILITY**

This chapter discusses the history of consumer behavior. Then it moves on to define consumers as understood in this study. Further, it looks at how consumers are related to sustainability and ultimately at what affects responsible buying decisions.

#### **3.1 Consumer behavior**

In the United States, after the World War II, it was easy to sell practically anything to the consumers who had been deprived of buying goods due to the production capacity being used for war supplies. Technology developed fast, however, and new products were brought to the market constantly, which led to consumers having more options and thus, developing more refined tastes. It became important to understand the individual needs and wants of consumers to be able to target them better. (Schiffman & Kanuk 1983, 13-14)

The studying of consumers' behavior began in the 1950s (Nicosia & Mayer 1976, 65) when consumers were put in the center of marketing planning because companies began to understand production should be guided by demand rather than production capacity (Schiffman & Kanuk 1983, 13). The purpose of consumer research is to understand the choices an individual consumer makes and how these decisions are reached (Nicosia & Mayer 1976, 65; Cohen & Chakravarti 1990, 267). The first studies were broad and general and showed that consumers' actions and views are unique. More detailed and narrow studies were needed to understand the psychological and social nature of buying. (Schiffman & Kanuk 1983, 13) Consumer research has both independent scientific value and business value for marketers (Cohen & Chakravarti 1990, 267).

Even if the study of consumer behavior is seen merely as a subcategory for marketing research, it can still be independent from company specific aims. It can be seen as a holistic study of how individuals act in the market. (Macinnis & Folkes 2009, 911) This study is not designed to benefit a specific company. Rather its goal is to understand consumers' perceptions of their behavior in a wider sense.

### 3.2 Who is the consumer?

There are two types of consumers: individual or private and organizational ones. This study focuses on the private consumers. The concept of consumption is a little bit complex as well. The buyer of a product or service is not always necessarily equivalent to its user. The product may be bought as a gift, on behalf of someone or to share for example. Thus, it is important to understand the difference between the buyer and the consumer of a commodity. (Schiffman & Kanuk 1983, 7) This study looks and the buying decisions of consumers. It views the consumers as end consumers but aims to map the ideas, opinions and thoughts behind the buying without looking into the actual consumption, thus what happens after the buying.

There are several ways of understanding individuals as consumers. There are also multiple ways in which their behaviors and manners in relation to buying can be understood. One of the common ways is to divide consumers into three groups: the Economic man, the Passive man, and the Cognitive man. (Schiffman & Kanuk 1983, 535-536)

First, the Economic man -view sees consumers as rational decision makers who base their actions on information purely. The Passive man -view is opposite. It reflects the consumer as merely an object of marketers and salespersons wishes who has no impact on its own decisions. The Cognitive man –model comes in the middle of these opposite views. It sees consumers as active problem solvers who put just enough effort in finding the right solution for themselves. (Schiffman & Kanuk 1983, 535-537)

As consumer research began, it soon became clear that the amount of differences between consumers is vast. Thus, as mentioned in the introduction, rather than try and force consumers into one, two or multiple artificial molds it is more worthwhile segmenting them in groups based on their actual attributes or factors in their environment. Not everyone wants the same products. On the contrary, many wish to stand out and express their individuality through their product choices. (Schiffman & Kanuk 1983, 14) The following section briefly looks into the factors that affect consumers' decision-making process in buying.

The views of specific consumer types as such are too simplistic to understand the complexity of both individuals and the different types of situations of buying. First, there are many factors, which affect the individuals' personality and thus their decision making process in general. Like other decisions, buying decisions are affected by the individual's cognition. One's cognition is a unique sum of all the internal and external influences the individual has been subject to. Thus, no two individuals have the same exact cognitions although they may be similar in many aspects. (Chisnall 1995, 23-24)

The type of buying decision also affects the process. For instance, the thought process, reasoning and weighing of alternatives is most likely a lot different when buying everyday groceries than when buying a house. When buying household products, it may be more convenient for the individual to stay with the brands they have used and found satisfactory before. If the individual is extremely fond of certain products or brands, it will be very hard to convince them to try something new. This fondness usually builds over time with continuous use of the products and is difficult to brake. (Chisnall 1995, 197) In addition, both physical and personal proximity to the product affect the decision process. Very often consumers choose the option that is easiest and closest to them. (Schmeltz 2011, 40)

### **3.3 Consumers and sustainability**

Both consumers and companies have been aware of the harmful impacts products can have for the environment for decades. Alternative and more environmentally friendly options have been designed for those consumers who are aware and worried about environmental issues. (Schiffman & Kanuk 1983, 15) Although companies and policy makers play a key role in promoting and advancing sustainability, consumers ultimately make the choices. Each individual buying decision helps either in building a better future for the environment or in bringing it down. (Kinnear et al. 1974, 20) Thus, by providing consumers with ecological products that they find superior to "normal" products companies can further sustainability.

Increasing awareness of environmental issues has inspired marketers and policy makers to search for and classify those consumers who are receptive to responsible

choices. Not only does defining the segment of socially concerned consumers serve the marketers wishing to sell more ecological products even more importantly it serves policymakers in reinforcing their views. Previous research proposes that a segment of socially conscious consumers can be separated from the rest of the society. (Anderson & Cunningham 1972, 30-31)

Not only has the amount of socially concerned consumers increased, their behavior has also evolved to be more worthy of marketers time. Bonini and Oppenheim (2008, 61) claim that already 33 percent of consumers are ok with paying a higher price for a product that is green. Even more changes in purchasing behavior have occurred. In 1995, it was stated that compared to traditional consumers green consumers are less faithful to certain products or brand. They are consistently searching for new information and products. (Shrum et al. 1995, 80) Later it has been found, however, that consumers who view environmental issues to be of importance most likely are consistent in buying green products (D'Souza et al. 2007, 77; Jansson et al. 2010, 366). Even further, once the consumer has chosen the green product or brand they are more likely to keep choosing it against other products and thus become loyal to it. Thus, once the traditional consumers are convinced that green products are a good fit for them they will return. (Jansson et al. 2010, 366)

Concentrating on this niche market and forgetting the traditional consumers would still most likely be unwise, however (Kinneer et al. 1974, 23; Gleim et al. 2013, 45). Therefore rather than look for the right consumers for their ethical products companies should strive to create responsible consumers and boost the responsible aspects of consumer behavior. Because consumers' ultimately look for products that fulfill their needs the key is shifting from emotional value to functionality. This means that ethical or ecological aspects of the product need to be portrayed and ultimately perceived as truly adding to the usefulness and purposefulness of the product. When it comes to responsible buying the consumer is not the one to set the rules but the one that has to be guided into the right direction. It is only a small portion of consumers that push the companies to bring to markets more ethical products. The majority of consumers need to be shown the way to more responsible buying. The phenomena can be compared to the rise of any new technology such as the Internet. It takes time

before consumers start to recognize and comprehend their own demand. (Devinney 2012, 232, 234)

### **3.4 Factors affecting responsible buying decisions**

First, it is important to distinguish between responsible buying and ethical buying. Ethical buying means including a moral or value based aspect to all buying decisions. The buying decisions are based on what the consumer considers ethically right. Thus, ethical buying looks at why the consumers make the decisions they make. There is no use in trying to find the ethical consumer. If a consumer were ethical, by definition it would mean that all his or her buying decisions were based on ethics and not for example price, availability or comfort. This is very unlikely. (Devinney et al. 2012, 228, 231-232)

Socially responsible buying on the other hand is not concerned about the value aspect but merely looks at the consumer behavior as such. It looks at the so-called non-functional aspects of buying, and whether the consumer considers them when buying. It cannot be seen what the reasons behind the decisions are by simply looking at the decisions. Thus, an individual's choice to buy eco-labeled products for example does not imply they are ethical per se, although the behavior may benefit the environment, but may merely rise from the egoistic needs of that individual. The socially responsible consumer takes some social aspects into consideration when making their decisions. (Devinney et al. 2012, 228, 231-232) They may for example make sure that the clothes they buy are not sewn by children but still drive alone in a big car that produces huge emissions. It is the consumers' decision which aspects are important to them and what kind of features they prefer and therefore companies can benefit from finding out these preferences. This study studies responsible, not ethical buying.

Table 1 summarizes the key findings of the central studies used in this research. These studies have studied consumers' views of ethics, CSR and sustainability in the forest industry as well as how sustainability and ecologicalness relate to consumers and buying.



Table 1 Central studies used in this research.

Author(s)	Year	Method	Education	Gender	Views of CSR	Ethical views	Ecological buying	Views of CSR in forest industry	Findings
Studies that have used students as sample									
Prasad et al.	1998	Survey	x	x	x				Corporations have most responsibility in building just society. Students more likely to have stricter ethical views in the contexts they study. Women have stricter ethical views.
Cohen et al.	1998	Survey	x	x		x			Students, especially women highly appreciate stakeholder values rather than shareholder values. Women value ethical, environmental and societal responsibilities of business more. Students highly appreciate stakeholder values rather than shareholder values. Women more concerned about CSR.
Lämsä et al.	2008	Survey	x	x	x				
Alonso-Almeida et al.	2015	Survey	x	x	x				
Auger et al.	2008	Survey					x		Socially conscious consumers likely to put high importance on overall goodness of products instead of specific aspects.
Panwar et al.	2010	Survey	x	x				x	Women significantly more skeptical towards sustainability of forest industry. Study major has some effect on satisfaction.
Amberla et al.	2011	Survey	x					x	Students feel forest industry is meeting financial goals and responsibilities but not ecological responsibilities as thoroughly. Problems: taking care of and sustaining biodiversity and forests that are not used for business.
Other studies									
Kinnear et al.	1974	Survey	x	x			x		Socio-demographics weaker in explaining environmental attitudes/behavior than personal attributes. Harm avoidance (unless extreme) motive for buying ecological.
Diamantopoulos et al.	2003	Survey	x	x			x		Women have stronger environmental attitudes and are more likely to buy green. Higher education has partial positive effect on environmental behavior. Overall socio-demographics have weak explanatory power for environmental attitudes/behavior. Barriers of ecological buying: lack of knowledge, quality bigger barrier than price. Demographics have some explanatory power for buying ecological.
D'Souza et al.	2007	Survey	x				x		Personal attributes such as values, norms and beliefs as well as familiarity have a positive impact on ecological buying. Previous habits barriers.
Jansson et al.	2010	Survey	x	x			x		Women more likely to be socially conscious consumers.
Webster	1975	Survey		x			x		Overall socio-demographics have weak explanatory power for environmental attitudes/behavior.
Shrum et al.	1995	Survey		x			x		Attributes of green shoppers: opinion leader, interested in new products and exchanging information, careful in shopping habits, not loyal to brands.
Gleim et al.	2013	3 surveys					x		Barriers for ecological buying: price, quality, trust, lack of availability, awareness or expertise
Bonini & Oppenheim	2008	Survey					x		Price not a strong barrier for buying ecological.
Wang et al.	2013	Survey						x	Consumers satisfied with CSR in forest industry because industry tries to satisfy them.
Zhen & Aguilar	2014	2 surveys					x	x	Good ethical performance is expected but not rewarded by buying. Awareness of CSR issues low.

Sustainability issues are widely discussed in many forums and contexts. Consumers often claim they care about protecting and saving the environment and other ethical matters. Even so, not many individuals take actual measures, such as decreasing their carbon footprints for example, to improve sustainability. (Bonini & Oppenheim 2008,

56) In fact, although consumers are aware of sustainability issues they often do not think their single purchasing decisions can have an effect on the environment. This can in part decrease their willingness for responsible buying. (Gleim 2013, 46)

Another fact that affects responsible buying negatively is that the majority of consumers do not know about the variety of ethical products available (Gleim 2013, 47). This is partly due to companies not putting enough effort into increasing consumers' knowledge about the options and showing what makes ethical or sustainable products worth-to-consider and good alternatives. On the other hand, companies are not initially considering consumers' desires when designing ethical products. This prevents them from luring consumers. (Bonini & Oppenheim 2008, 56)

Overall, some indications of what might affect individuals' views and opinions about the ethicalness of different actions and choices have come up in previous studies. Quite naturally, ethics related studies increase the ethical thinking of the individual (McManus & Subramaniam, 2009, 619). In addition, studies have found that the major of a student often affects their ethical ideas and views in a specific framework. For example, in relation to accounting issues accounting students were more strict in their views of what would be ethically questionable than other business students. (Cohen et al. 1998, 264) Further, it has been found that business education affects students' views on social responsibility issues in business. The appreciation of meeting shareholders' needs grew whereas the appreciation of equal job opportunities reduced. Business studies also affect the individual's behavior by decreasing the tendency to encourage others to action in matters that are undesirable. The individual's willingness to express their differing opinions also decreases through studies. (Lämsä et al. 2008, 45, 52-53)

More generally, the group surrounding the individual affects one's ethical understanding and assessment of the degree of wrongness of a situation or act. Especially professionals at the beginning of their career tend to be more affected by how their colleagues and seniors act and what they say. (McManus & Subramaniam, 2009, 619)

However, when it comes to buying many have argued these types of socio-demographic variables have little if any explaining power. For example, they seem to not affect consumers decisions to buy green (Panwar 2010, 29; Jansson et al. 2007, 366; D'Souza et al. 2007, 77) because environmental issues are so commonly discussed that the majority of consumers are aware of them (Diamantopoulos et al. 2003, 477). Instead, the responsibility buying decisions are largely affected by emotional and opinion-related aspects and personalities (Jansson et al. 2007, 366; D'Souza et al. 2007, 77; Kinnear et al. 1974, 22) or even merely the situation when the decision is made (Diamantopoulos et al. 2003, 477).

Besides the fact that consumers overall seem to lack information and awareness about what exists and what kind of affect they can have through they buying decisions, there are not many factors that rise constantly as explanations of ethical or unethical behavior. However, a few findings rise from numeral studies. First, all in all women consider social and environmental issues more than men do in their decision-making processes (Lämsä et al. 2008, 55).

It has been found that the perceived costs of buying sustainable products often surpass the perceived benefits of buying them. The reasons for this can be multifaceted. They can be financial if the consumer does not believe they are getting their money's worth and thus the price of the product is perceived to be too high. The costs can also relate to the threat of the product not meeting the expectations and wanted standards of the consumer and thus the quality of the product is perceived to be too low. (Gleim 2013, 46)

Many studies have found that the gender of an individual affects their opinions on ethics. In other words, women and men evaluate the ethicality of a certain actions and situations differently. Multiple studies have found that gender affects an individual's understanding of what is ethical (McManus & Subramaniam, 2009, 619; Cohen et al. 1998, 250, 256; Alonso-Almeida et al. 2015, 10; Ruegger & King, 1992, 179). This does not seem to vary according to culture as similar findings have been made in Russia (Deshpande et al. 2000, 179), Turkey (Ekin & Tezölmez, 1999, 17) and Finland (Lämsä et al. 2008, 45) at least.

More specifically, women have a tendency to put stricter boundaries on what is ethical and what is not and are more likely to view an action to be unethical than men. (Cohen et al. 1998, 250, 256; Alonso-Almeida et al. 2015, 10) Interestingly, however, it has been found that the differences in ethical views between genders are affected by whether the individual is employed or not. The women and men that are unemployed or work only part-time have similar ethical views whereas the women who work fulltime have stricter ethical principles than the men who work fulltime. (Mason & Mudrack, 1996, 179, 599)

Women are more ethical when it comes to ethical situations in the working environment as well. When it comes to business decisions and conducting business, women are stricter than men are about what is ethical and what is not. (Ruegger & King 1992, 179) More specifically, female students feel more strongly than men that their values and ideas of what is ethical have to match with the company's overall values and ideas. For women working in a company that would act against their ethical understanding would be more stressful and cause more strain than for men in the same situation. (Lämsä et al. 2008, 52) More specifically, multiple studies have also found that female managers are more ethical than male managers are (Ekin & Tezölmez, 1999, 24-26; Deshpande et al. 2000, 179).

Not only do women have stronger views on what is ethically correct they also put more weight on the wrongfulness of acting in a manner that they see unjust. Thus, although men might agree on an action being ethically questionable they do not necessarily judge the behavior as harshly as women do. (McManus & Subramaniam, 2009, 638) In fact, a study researching the ethical views of students found that especially male business students claim they may at times act against their own ethics when it comes to making business decisions. Women, however, do not state that they act against their ethical views. (Prasad et al. 1998, 222)

In previous studies that have studied students it has been found that in general, women are more interested in how companies act and whether they are engaged in CSR. Further, social and environmental sustainability is more important for women than men. (Alonso-Almeida et al. 2015, 10, 13) Female students put more value and weight on

how responsibly a company acts and see it as a core part of a successful business. Male students do not share these views as strongly. Women also see issues such as environmental and social sustainability as more important for business than men do. (Lämsä et al. 2008, 50-51)

Thus, all in all not only are women more likely to see a certain action or situation as unethical they are also more likely to refrain from behaving in a manner that they consider questionable. Women also tend to expect their peers to behave in a manner they see ethical whereas men view taking these types of actions more likely for both themselves and their peers. Women especially feel that it is their responsibility to behave in certain manner and put more weight on what is just. (Cohen et al. 1998, 261, 264) On the other hand, men have greater belief than women do in technology when it comes to solving for example environmental problems. Even further, men are more likely to believe that the technological changes can be so significant that no adjustments to lifestyle have to be done. (Wehrmeyer & McNeil 2000, 214-215, 220)

When valuing companies students view acting responsibly towards stakeholders more important than acting responsibly towards the shareholders. Female students value the stakeholder point of view more highly than male students do. Female students also put more emphasis on the importance of issues such as social and environmental sustainability throughout their studies. This means that the views are deeply embedded and the studies of the individual have little effect on this fundamental difference between the views of men and women. (Lämsä et al. 2008, 45)

In general, male business students put more weight on the hard side of business success and value financial results and pleasing the shareholders of a company whereas female business students appreciate the softer side of success and put importance to meeting the needs of the stakeholders, such as the environment and people. These views are not affected by business studies, which indicates they can be seen as characteristics of the genders. (Lämsä et al. 2008, 55)

It is more likely for women than men to engage in environmental behavior both by acting themselves and by inspiring and reassuring others. However, this does not

mean that women as a group are highly pro-environment but merely that they are more likely to take action should they feel it important. Quite interestingly, it has also been found that men's views and opinions on environmental actions are affected by their position much more than women's values are. Thus, the environmental values and opinions of women seem to be more deeply embedded within their personality than men's views. (Wehrmeyer & McNiel 2000, 211, 220)

Looking more specifically at the actual buying decisions related to ethical products there are a couple of factors that prohibit it that have come across in several studies. First, numeral studies have found that price is the main obstacle for buying ecological products (Gleim 2013, 47; Mohr 2001, 67-68) and that the ethical aspects of a product as such are not necessarily perceived as adding extra value. The value of the ethicalness of a product stems from the individual's moral and emotions and thus is not universal to all consumers. (Devinney et al. 2012, 229-231)

Even though price may be the most common obstacle for buying ethical products it often is not the only one (Gleim 2013, 49). In fact, it has been found that the higher price of an ethical product has less negative effect on the consumers' willingness to buy it than the perceived lower quality compared to its traditional alternative (D'Souza et al. 2007, 77). Even further, it has been found that once the consumers are convinced of the benefits and the superiority of ethical products the price usually is no longer an issue. (Bonini & Oppenheim 2008, 61; Devinney et al. 2012, 231). For example, a study on consumers perceptions of wooden furniture in New Zealand found that the origin of the product, and how the raw material is grown are more important to most consumers than price (Biggsby & Ozanne 2002, 104). However, consumers still often assume that the ethical product is of a lesser quality than its traditional alternative. Some of these views are based on prior experience. (Gleim 2013, 47) In any case, the perceived trade-off between sustainability and the quality of products is imbedded deeply in the attitudes of consumers (Mohr 2001, 67-68).

Being socially acceptable is not important to the socially conscious consumer. Rather they are concerned with the morality and effects of their behavior. They do not wish to evaluate the views and opinions of others. (Webster 1975, 188) They view themselves

as attitude leaders or first movers. They are watchful in their decision-making and do not make impulsive decisions. (Shrum et al. 1995, 80)

## **4 EMPIRICAL ANALYSIS OF FUTURE CONSUMERS' SUSTAINABILITY PERCEPTIONS**

This chapter discusses the research that was conducted for this thesis. First, the framework of the research, thus where it fits in a wider context, is introduced. Further, the method of the study, the sample and the data collection are conversed. Next, the data is described in detail to give a clear understanding on who the respondents are. After this, the data is grouped according to the research question it answers and the results of the analyses are portrayed. Last, the results are summarized before moving to the conclusions of the study.

### **4.1 Research framework and method**

Interest towards sustainability issues in the forest industry has grown in the recent decade. Business scholars have conducted most of these studies but other fields also show interest towards these issues. (Ranängen & Zobel, 2014, 309) This thesis will contribute to the research project "Forescof – Searching for Sustainable and Competitive Future for the Forest Sector". More precisely, it will contribute in scouting for the consumers' opinions, understandings of and valuations for forest related products.

The topic is important for the forest industry because it helps in understanding how consumers feel about the industry and what they expect. It helps in understanding what consumers are looking for from the forest-based products, and whether they see sustainability within the forest industry valuable and important. This information can be utilized in persuading consumers to make desired decisions in the future.

The research is conducted quantitatively. The survey designed for this research was distributed in two countries, Finland and Hong Kong. Quantitative research method was chosen to increase the amount of data and thus, the generalizability of the results. Further, survey was chosen as the method of data collection because it is an efficient manner of collecting a meaningful amount of data. The survey was distributed and the answers collected and recorded online.



The questions of the survey were designed in co-operation with Wong with help and feedback from the professors who supervised the work. Questions were designed so that the respondent would not have to be especially familiar with the forest industry. Terms that are not commonly used were explained in the survey. Before the final data collection, the survey was tested with a small group (8 people) to find out possible risks for misunderstandings and other problems. Minor adjustments were made after this before publishing the survey.

The tool chosen to conduct the survey was Qualtrics. Qualtrics is an online survey tool that allows collecting, storing and analyzing data. It fit the purpose of the research perfectly. Qualtrics is an easy-to-learn and flexible tool that allows multiple types of questions and using different languages. Further, it allows easy distribution online.

The data was collected from university students in Finland and Hong Kong. The reason for collecting data in these two countries rises from the objectives of the project the research is a part of. Further, the personal background of one conductor of the research affected the choosing of Hong Kong in particular as the other country. As one of the conductors is from Hong Kong, the threshold of collecting data there is low. Not only is Wong a native speaker of Cantonese Chinese, which was used as the language of the survey in Hong Kong, she only has connections in the study world there.

The reasons behind choosing university students as the sample are twofold. First, today's students are tomorrow's consumers and consumers who will set the demand level for ethics and responsibilities in business (Amberla et al. 2011, 485). This is a widely shared view and students have been used as a focus group in multiple buying related studies (e.g. Lopez et al. 2005, 341; Kumar, 1995, 32; Ahmed et al. 2003, 89; McManus & Subramaniam, 2009, 619, Auger et al. 186). Further, it is common to study students' ideas and perceptions when trying to portray and understand ethics related issues (Prasad et al. 1998, 221). More specifically, students' have been previously in studies about consumers' views and understanding of the forest industry and its sustainability in particular (e.g. Amberla et al. 2011, 476, Panwar 2010, 18).

The second reason of collecting data from university students is their proximity to the conductors of the research. As the research is conducted by two university students this group of people is easily reachable for them. This makes the chosen method of data collection both resource efficient in these circumstances.

## **4.2 Data collection**

This study uses only primary data collected for the sole purpose of being utilized in this research. In Finland, the data was collected by surveys from the students of the Lappeenranta University of Technology, University of Turku; Turku School of Economics and University of Helsinki. These universities were easily accessible to the conductors of the research due to personal connections to them. In all universities the survey were distributed through e-mailing lists. In Lappeenranta, the survey was also distributed in study-related Facebook groups.

The research survey of this study has targeted the pool of degree-students in Lappeenranta University of Technology (LUT), which amounts to approximately 4900 individuals (LUT 2016b). There are three schools and multiple lines of study in LUT. The study lines are divided into two main groups; Technology and Business. Under technology, there are eight different study lines (2016c). However, this study will not make a division between all of these lines but will look at technology students as one group. LUT is a highly international university with students over 60 countries (LUT 2016a). Thus, the backgrounds of the respondents are likely to be diverse.

In LUT, the survey was spread by the student services through emailing lists that are used for distributing study and campus life related information, such as the Student union newsletter and the "ic"-list, which targets international students. These forums reach all degree-students in LUT. In addition, to increase the visibility of the survey, it was shared on study related Facebook groups for both Finnish and international students.

In University of Turku, the survey was spread in one unit, Turku School of Economics (TSE). In the year 2015, when the study was conducted there were altogether 2,919

business students studying in TSE (University of Turku 2016a). In TSE, the survey was spread by the study services through an email list that reaches all degree students and is used for sharing study related information. In Turku, the conductors of the research did not have access to study related Facebook groups. However, personal connections were used to spread word-of-mouth in order to increase the response rate.

In University of Helsinki, the survey was distributed in the faculty of agriculture and forestry. There are 2,700 students in the faculty (University of Helsinki 2016). In Helsinki, the survey was distributed through an emailing list with the assistance of a member of the staff at the faculty.

In Hong Kong, the survey was spread through Wong's personal connections in four Universities; City University of Hong Kong, The Hong Kong Institute of Education, Hong Kong Polytechnic University and The University of Hong Kong. In addition, it was spread on an Internet forum (<http://www.discuss.com.hk/forumdisplay.php?fid=44>). These types of forums are commonly used by young people in Hong Kong to search for information and take part in discussions in different topics. The survey was shared in the education section of the forum to target students.

The City University of Hong Kong (CityU) has 25 academic departments and provides a vast range of study majors including business, liberal arts, social sciences, science and engineering, energy and environment, law etc. (City University of Hong Kong 2016a). There are altogether 18,525 degree-students in CityU out which 16,188 are fulltime students (City University of Hong Kong 2016b).

The Hong Kong Institute of Education (HKIEd) has seven campuses that all provide education in teaching and education (The Hong Kong Institute of Education 2016a). The amount of fulltime degree-students in the university in the academic year 2013/2014 (this is the latest data available) was 8,634 (The Hong Kong Institute of Education 2016b).

The Hong Kong Polytechnic University has six faculties; Applied Sciences and Textiles, Business, Construction and Environment, Engineering, Health and Social Sciences and Humanities, and two schools; Design and Hotel and Tourist Management (The

Hong Kong Polytechnic University 2016a). During the academic year 2014/2015, there were altogether 31,864 degree-students studying in the university. (The Hong Kong Polytechnic University 2016b)

The data was collected within six weeks in May-June of 2015. The aimed amount of completed surveys is 100 from both countries. In actuality, the amount of respondents from both countries ended up to being 201 out of which 121 responses are from Finland and 80 from Hong Kong. Based on the student numbers of the targeted universities, in Finland the sample is approximately 10,500 students and in Hong Kong approximately 60,000. However, realistically because we, the conductors, did not have access to the all the official information channels of the universities not all of these students could have been used. Still, the answer rate that was reached is poor at best.

### **4.3 Data description and analysis**

Although the data collection is done in co-operation with Wong, the analysis of the answers is done independently. The data analysis of this study is conducted by utilizing SAS Enterprise Guide.

The analysis begins with describing the data. Table 2 portrays the independent variables of the data. Out of the total 201 responses, 121 (60.20%) came from Finland and 80 (39.80%) from Hong Kong. Thus, it can be said that the goal of a 100 answers is reached in Finland but not quite reached in Hong Kong.

Table 2 Description of the respondents.

Characters of respondents	Category	N	%	Characters of respondents	Category	N	%
All		201		Studying	Fulltime	116	57.71
Complete	Yes	142	70.65		Part time	24	11.94
	No	59	29.35		Not at all	61	30.35
Country	Finland	121	60.20	Study field (N=95)	Humanities	22	11.28
	Hong Kong	80	39.80		Natural Sciences	66	33.85
Nationality	Finland	71	35.32		Social Sciences	95	48.72
	Hong Kong	87	43.28		Agriculture and Forestry	12	6.15
	Other	43	21.39	Working	Fulltime	85	42.29
Age	Under 20	18	8.96		Part time	47	23.38
	21-25	120	59.70		Not at all	69	34.33
	26-30	48	23.88	Monthly income	0-499€	60	29.85
	31-35	10	4.98		500-999	42	20.90
	36-40	3	1.49		1000-1499	35	17.41
	41-45	2	1.00		1500-1999	29	14.43
Gender	Female	111	55.22		2000-	35	17.41
	Male	89	44.28	Monthly spending	0-399	54	26.87
	NA	1	0.50		400-799	80	39.80
Children	Yes	4	1.99		800-1199	41	20.40
	No	197	98.01		1200-1599	20	9.95
					1600-	6	2.99

However, only 142 (70.65%) of all the answers are fully completed, which means that only 142 respondents have answered all the questions whereas 59 (29.35%) respondents have either skipped some questions or quit answering before the end. Only the background questions were set as compulsory to answer. Further inspection on the unfinished answers found that 28 (13.93%) of the incomplete answers came from Finland and 31 (15.42%) from Hong Kong. To conclude, the final amount of complete answers from Finland is 93 which is almost the aimed amount and the amount of complete answers from Hong Kong is 49 which is about half of the aimed amount. Incomplete answers can still be used in the analysis, however. During each analysis, the amount of data used will be shown.

Next, although the survey was distributed in two countries, Finland and Hong Kong, the nationalities of respondent are not limited to these two options. Still, Finland and Hong Kong are the biggest individual groups, 71 (35.32%) and 87 (43.28%). In order to simplify the data and the analysis, the group 'Hong Kong' includes all Asian respondents. The next biggest groups are Russia 16 (7.96%) and those who have not announced their nationality 11 (5.47%). Other nationalities are scattered with only one to three respondents from each nationality. Therefore, all the other nationalities are grouped as one. The nationalities of the respondents are not used in the further

analysis of the study. Instead, the respondents are divided into two groups according to the country they have responded from.

Majority of the respondents are quite young, which is natural as the sample consists mostly of students. The majority of respondents (120 or 59.70%) are from the age group 21-25 years old. The second biggest group is 26-30 years old, which comprises of 48 (23.88%) respondents. The two smallest age groups, 36-40 and 41-45 years old, have altogether five (2.49%) respondents. This as well is understandable as it is more common to study at a younger age. Also understandable is the fact that only four (1.99%) respondents say they have children. All of these respondents have answered from Finland.

The gender distribution of the respondents is close to equal. Out of the 201 respondents, 111 (55.22%) are women, 89 (44.28%) men and one (0.50%) does not wish to tell their gender. By sorting the data based on gender and country it is found that out of the 111 women 61 (54.95%) respond from Finland and 50 (45.05%) from Hong Kong. Out of the 89 men 59 (66.29%) respond from Finland and 30 (33.71%) from Hong Kong. Thus, the gender groups are more equally sized in Finland (50.41% women and 48.76% men) than they are in Hong Kong (62.50% women and 37.50% men). The one responded who does not wish to declare their gender is from Finland.

When looking at the study status of the respondents one notable thing is that although the survey targeted students, 61 (30.35%) respondents state they are not students and only 116 (57.71%) out of 201 study fulltime. Again, by sorting the data, information that is more detailed is found about these respondents. Out of the 61 respondents that are not students, 45 (22.39%) are in Hong Kong and 16 (7.96%) are in Finland. This group of respondents can be explained by the fact that the forums through which the survey is spread are accessible by resent graduates as well as current students. Further, in Hong Kong the survey was also distributed in a public forum, which made it possible that the respondent would not be a student.

Even though the target of study is to study students, these 61 respondents are not excluded from the data analysis. The assumption is that at least most of them have

graduated only recently and thus, are not far from being students. In addition, further inspection showed that 43 out of the 61 non-students are from the age group 21-26 years old. Thus, they still represent young people and as such the future consumers. Out of the 24 part time students only 5 (2.49%) answered from Hong Kong and 19 (9.45%) answered from Finland. These respondents are naturally included in the data analysis as well.

More than half of respondents (132 or 65.67%) work either fulltime or part time. This data is sorted by country of response to find that half of these respondents (66) are in Hong Kong. Thus, only 14 (17.5%) respondents in Hong Kong do not work at all whereas the same number for respondents in Finland is 55 (45.45%).

Even though many respondents say they work, the monthly incomes of the respondents are relatively low. Half of the respondents (102 or 50.75%) say their monthly income is between 0-999 euros. Still, as many as 64 (31.84%) say they earn more than €1500 per month. Only 26 (12.94%) respondents say they spend more than €1200 per month whereas 134 (66.67%) say they spend less than €800 per month.

The shopping patterns of the respondents also support the fact that they do not spend money constantly. Only eight (out of 180 thus, 4.44%) respondents say they shop groceries daily and only three (out of 179 thus, 1.68%) say they shop other things daily. Shopping of groceries is overall much more frequent than other shopping. Out of 180 respondents, 82 (45.56%) say they shop groceries several times a week and 54 (30.00%) say they do it once a week whereas the same numbers for shopping other things are 17 (9.50%) and 16 (8.94%).

Before beginning the analysis, the questions are grouped based on the research question they answer. The first group is the group of background questions, which give details about the kind of individuals that have answered the survey. This data was introduced and explained in detail in the previous section. Next, the answers to the statement-questions, will be analyzed in reflection of two independent variables, gender and country of response. Each question is analyzed from four angles; 1. differences between the genders, 2. differences between the countries of response, 3.

differences between genders within each country of response, and 4. differences between the response country within each gender. The data is tested by using One-Way ANOVA and the homogeneity of the variance of the compared groups is verified by Bartlett's test of Homogeneity of Variance. Those analyses in which the variances of the groups are not homogenous are left out of the results regardless of whether they show statistical significance. Only the results that are relevant in answering the research questions are then reported in the Results-part.

## **4.4 Results**

The following three sub-chapters display and discuss the results of the quantitative analyses of the survey data. The analyses have been divided according to the research question they answer.

### **4.4.1 The role of sustainability in buying decisions**

The analysis begins with the questions that answer the main research question i.e. what, if any, role does sustainability have in future consumers' buying decisions. These are S2Q3, S2Q5, S4Q1, S4Q3 and S4Q4. The 'S' in front of a number refers to section of the survey and 'Q' in front of the number refers to the question within that section. Thus, S2Q3 is the third question of section two and so forth. The survey is available in full in the appendices of the thesis and the sections are numbered there to ease referring to them in the text.

First, S4Q1 ("I buy ecological products") divides the respondents into two groups, those who buy ecological products and those who do not. The frequencies of the answers are displayed in Table 3. Out of the 179 respondents that have answered this question 130 (72.63%) answered 'yes'. By sorting the answers by country of response it is found that out of the 71 respondents from Hong Kong 53 (74.65%) answered 'yes'. Out of the 108 respondents from Finland who answered the question 77 (71.30%) answered 'yes'. There is no statistically significant difference in the tendency to buy ecological products between the countries, however.



Table 3 "I buy ecological products"

<b>I buy ecological products</b>	Yes	%	No	%	P
All respondents (N=179)	130	72.63	49	27.37	
Hong Kong (N=71)	53	74.65	18	25.35	0.63
Finland (N=108)	77	71.30	31	28.70	
Men (N=82)	53	64.63	29	35.37	0.02
Women (N=96)	77	80.21	19	19.79	
Hong Kong Men (N=29)	21	72.41	8	27.59	0.72
Hong Kong Women (N=42)	32	76.19	10	23.81	
Finland Men (N=53)	32	60.38	21	39.62	0.01
Finland Women (N=54)	46	85.19	9	16.67	

The difference in answers between the genders is notable. Women are much more likely ( $Pr > F = 0.02$ ) to buy ecological products with 80.21% of them answering 'yes' when only 64.63% of men do so. Interestingly this trend is not equally clear in both countries, however. In Hong Kong, there is no statistically significant difference between genders. In Finland there is a difference between genders and the difference is statistically significant ( $Pr > F = 0.01$ ).

To dig deeper into the differences of views between genders and respondents from different countries One-way ANOVA is conducted on the remaining questions (S2Q3, S2Q5, S4Q3 and S4Q4). All of these questions consist of statements with seven-point Likert scales where 1= I strongly disagree and 7 = I strongly agree. To start the analysis, the statements are run through Factor Analysis to find possibilities for summarizing the data.

The analysis begins with question S2Q5 (Please indicate the degree to which you think the following aspects of a product are important). The question contains seven aspects of products, namely packaging, price, quality, style, how ecological the product is, place of production, and practicality. The importance of each of these aspects is asked in two product groups, grocery and paper products. These two product groups were chosen to see whether there are differences between forest-based products and other products in what consumers view important.

Through factor analysis, the product aspects of this question are summarized into four factors. This condenses the data and thus makes the analyzing simpler. It is clearly visible that there is not difference between the product groups in how important the

individual aspects are seen. However, the initial factor analysis of S2Q5 finds that one of the aspects does not reach a satisfactory correlation level with the other statements to be included in the factors. This statement is “quality of groceries”. A new analysis is conducted without this aspect and the final factors are displayed in Table 4. The factors cover 64.1% of the overall data, which is a satisfying level.

*Table 4 Factor Analysis – S2Q5*

Please indicate the degree to which you think the following aspects of a product are important.  
(1=not important at all, 7=very important)

	F1	F2	F3	F4
N=165 MSA=.644				
Grocery: packaging	.746			
Grocery: style	.678			
Paper: packaging	.795			
Paper: style	.749			
Grocery: how ecological the product is		.747		
Grocery: place of production		.776		
Paper: how ecological the product is		.715		
Paper: place of production		.740		
Grocery: practicality			.696	
Paper: quality			.599	
Paper: practicality			.879	
Grocery: price				.885
Paper: price				.842
Eigenvalue	3.47	1.99	1.69	1.19
Proportion %	26.7	15.3	13.0	9.1
Cumulative %	26.7	42.0	55.0	64.1
Cronbach Alpha	.773	.769	.623	.710

Based on how the factors form, it is clear that individuals view grocery products and paper products in a similar manner. The factors groups the same aspects of each product. Thus, if a person for example views that the price of a grocery product is important they are likely to think that price is also important for paper products. The factors are named here and after this point, they are referred to by their names.

Factor 1 consists of four aspects: the packaging of groceries, the packaging of paper products, the style of groceries, and the style of paper products and is here forth referred to as Packaging and Style. Factor 2 consists of four aspects: how ecological the grocery product is, how ecological the paper product is, place of production of grocery products, and place of production of paper products and is here forth referred to as Ecologicalness and Place of Production. Factor 3 consists of three aspects: practicality of grocery products, practicality of paper products, and quality of paper

products and is here forth referred to as Practicality and Quality. Factor 4 consists of two aspects: the price of grocery products and the price of paper products, and is here forth referred to as Price.

Table 5 displays the basic statistics of each factor i.e. the amount of responses, means and standard deviations. The scale of the statements is from 1= Not important at all to 7= Very important. Thus, the higher the mean, the more important the respondents view the aspect.

*Table 5 Please indicate the degree to which you think the following aspects of a product are important. (1=not important at all, 7=very important)*

	N	Mean	SD
Packaging and Style	178	3.83	1.37
Ecologicalness and Place of Production	178	4.43	1.28
Practicality and Quality	178	5.59	0.97
Price	178	5.88	0.97

As visible in the table, Price (5.88) and Practicality and Quality (5.59) are seen as most important aspects of products and respondents are quite unanimous in these views (SD=0.97). Ecologicalness and Place of Production is seen as somewhat important (4.43) as well but there is more differing of opinions (SD=1.28). Packaging and Style are seen somewhat unimportant (3.83) but here the respondents are the least unanimous in their views (SD=1.37).

One-Way ANOVA is used to analyze the significance of differing views of different groups' valuing of the importance of Packaging and Style, Ecologicalness and Place of Production, Practicality and Quality, and Price. The results are displayed in Table 6. The P-values of the statistically significant results are **bolded** and colored red. All tests pass the Bartlett's test of Homogeneity of Variance. The number in front of the aspect indicates the ranking in overall importance, based on the means.

Table 6 One-Way ANOVA S2Q5

Please indicate the degree to which you think the following aspects of a product are important. (1=not important at all, 7=very important)

		Gender		Country		HK		FI		Male		Female	
		M	F	HK	FI	M	F	M	F	HK	FI	HK	FI
4 Packaging and Style	N	82	96	72	107	29	43	53	53	29	53	43	53
	M	3.67	3.98	4.20	3.57	4.00	4.34	3.50	3.68	4.00	3.50	4.34	3.68
	SD	1.46	1.27	1.25	1.39	1.44	1.10	1.46	1.33	1.44	1.46	1.10	1.33
	P		0.13		<b>0.002</b>		0.25		0.41		0.14		<b>0.01</b>
3 Ecologicalness and Place of Production	N	82	96	72	107	29	43	53	53	29	53	43	53
	M	4.21	4.65	4.63	4.30	4.58	4.67	4.01	4.63	4.58	4.01	4.67	4.63
	SD	1.30	1.21	1.27	1.27	1.19	1.34	1.32	1.11	1.19	1.32	1.34	1.11
	P		<b>0.01</b>		0.09		0.77		<b>0.007</b>		0.06		0.87
2 Practicality and Quality	N	82	96	72	107	29	43	53	53	29	53	43	53
	M	5.68	5.52	5.79	5.46	5.98	5.66	5.52	5.41	5.98	5.52	5.66	5.41
	SD	0.88	1.04	0.87	1.02	0.69	0.96	0.93	1.10	0.69	0.93	0.96	1.10
	P		0.34		<b>0.03</b>		0.13		0.62		<b>0.02</b>		0.24
1 Price	N	82	96	72	107	29	43	53	53	29	53	43	53
	M	5.95	5.83	5.85	5.90	5.98	5.76	5.92	5.89	5.98	5.92	5.76	5.89
	SD	0.94	1.00	0.90	1.03	0.88	0.91	0.98	1.08	0.88	0.98	0.91	1.08
	P		0.49		0.74		0.30		0.67		0.79		0.53

There are a few statistically significant differences between the groups in the first aspect: "Packaging and Style". First, in Hong Kong, respondents valued this aspect higher (4.20) than respondents in Finland (3.57) do ( $Pr>F=0.002$ ). Second, this difference is more clear between women as women in Hong Kong value packaging and style higher (4.34) than women in Finland (3.68) do ( $Pr>F=0.01$ ). Overall, the means for this aspect are the lowest, which indicates that this is the least important aspect of the product. For some groups, the mean drops below four, which means they consider this aspect somewhat not important.

Second, there are a couple statistically significant differences between the groups in the second aspect: "Ecologicalness and Place of Production". First, women view it as a slightly more important factor when purchasing a product (4.65) than men do (4.21) ( $Pr>F=0.01$ ). In Finland, this difference is especially significant ( $Pr>F=0.007$ ) as the difference between women (4.63) and men (4.01) is bigger there than in the whole data. However, both men and women put the importance of this aspect more on the plus side and even women do not consider it as even close to very important. Therefore, even though there is a difference it is not an enormous one.

There are a few statistically significant difference between the groups regarding the next aspect as well. Overall, the means for this aspect are the second highest, which indicates that this is the second most important aspect of products. Respondents in

Hong Kong value Practicality and Quality of the product higher (5.79) than respondents in Finland (5.46) do ( $Pr > F = 0.03$ ). This difference more significant between men as men in Hong Kong value the practicality and quality significantly ( $Pr > F = 0.02$ ) higher (5.98) than men in Finland (5.52) do.

There are no statistically significant differences between the groups in how important they think Price is as an aspect of the product. Based on the means being highest for this aspect, all groups see this as the most important aspect out of the four aspects.

Question S2Q3 concerns the manners of shopping. It consists of seven statements: “I only buy what I need”, “I prefer ecological products”, “I try to avoid spending money”, “Shopping is a way to pass time for me”, “I am an impulsive shopper”, “I mostly shop online”, and “I like buying things for my family and friends”. Respondents were asked to indicate the degree to which each statement describes their buying behavior. Table 7 displays the basic statistics of answers to the statements.

*Table 7 How well do the following statements describe your buying behavior, using a scale from 1 to 7. (1=Strongly disagree, 7=Strongly agree)*

	N	Mean	SD
I only buy what I need.	180	4.74	1.58
I prefer ecological products.	180	4.42	1.50
I try to avoid spending money.	180	4.99	1.51
Shopping is a way to pass time for me.	179	3.28	1.85
I am an impulsive shopper.	180	3.51	1.69
I mostly shop online.	180	3.25	1.52
I like buying things for my family and friends	179	4.26	1.71

The respondents overall somewhat agree with “I try to avoid spending money” (4.99), “I only buy what I need” (4.72), and “I like buying things for my family and friends” (4.26) but are not highly unanimous in their views (SD ranges from 1.51 to 1.71). At the same time, respondents somewhat disagree with “I am an impulsive shopper” (3.51), and “Shopping is a way to pass time for me” (3.28) even though they are even less unanimous in these views (SD’s are 1.69 and 1.85). These results indicate that the respondents are overall careful in their shopping. Lastly, respondents slightly agree with “I prefer ecological products” (4.42), and somewhat disagree with “I mostly shop online” (3.25) (SD’s are 1.50 and 1.52).

Based on One-Way ANOVA of S2Q3 there are significant differences in the manners in which men and women shop and spend money. The results of the test are displayed in Table 8. The P-values of those tests that yield statistically significant results are **bolded** and colored red. All tests pass the Bartlett's test of Homogeneity of Variance. The statements are ranked based on their means and the rank is marked in front of each statement. The higher the rank, the more the respondents agree with the statement. Overall, it can be seen that the shopping patterns of the groups differ in quite many ways.

Table 8 One-Way ANOVA S2Q3

How well do the following statements describe your buying behavior, using a scale from 1 to 7. (1=Strongly disagree, 7=Strongly agree)

		Gender		Country		HK		FI		Male		Female		
		M	F	HK	FI	M	F	M	F	HK	FI	HK	FI	
2	I only buy what I need	N	82	97	72	108	29	43	53	54	29	53	43	54
		M	5.27	4.29	4.49	4.91	5.34	3.91	5.23	4.59	5.34	5.23	3.91	4.59
		SD	1.34	1.61	1.64	1.53	1.37	1.56	1.41	1.60	1.37	1.41	1.56	1.60
		P	<b>0.0001</b>		0.08		<b>0.0001</b>		0.10		0.71		<b>0.04</b>	
3	I prefer ecological products	N	82	97	72	108	29	43	53	54	29	53	43	54
		M	4.27	4.55	4.29	4.50	4.55	4.12	4.11	4.89	4.55	4.11	4.12	4.89
		SD	1.41	1.57	1.39	1.57	1.21	1.48	1.50	1.56	1.21	1.50	1.48	1.56
		P		0.45		0.36		0.19		<b>0.03</b>		0.18		<b>0.02</b>
1	I try to avoid spending money	N	82	97	72	108	29	43	53	54	29	53	43	54
		M	5.29	4.73	4.72	5.17	5.31	4.33	5.28	5.06	5.31	5.28	4.33	5.06
		SD	1.44	1.53	1.59	1.43	1.47	1.55	1.43	1.45	1.47	1.43	1.55	1.45
		P		<b>0.05</b>		<b>0.05</b>		<b>0.009</b>		0.71		0.93		<b>0.02</b>
6	Shopping is a way to pass time for me	N	81	97	71	108	28	43	53	54	28	53	43	54
		M	2.58	3.88	3.77	2.95	3.29	4.09	2.21	3.70	3.29	2.21	4.09	3.70
		SD	1.65	1.82	1.88	1.77	1.84	1.85	1.42	1.79	1.84	1.42	1.85	1.79
		P	<b>&lt;0.0001</b>		<b>0.003</b>		0.08		<b>&lt;0.0001</b>		<b>0.004</b>		0.30	
5	I am an impulsive shopper	N	82	97	72	108	29	43	53	54	29	53	43	54
		M	3.11	3.86	3.78	3.32	3.38	4.05	2.96	3.70	3.38	2.96	4.05	3.70
		SD	1.64	1.66	1.79	1.61	1.84	1.72	1.52	1.62	1.84	1.52	1.72	1.62
		P		<b>0.008</b>		0.08		0.12		<b>0.04</b>		0.27		0.32
7	I mostly shop online	N	82	97	72	108	29	43	53	54	29	53	43	54
		M	3.24	3.24	3.19	3.29	3.00	3.36	3.38	3.17	3.00	3.38	3.36	3.17
		SD	1.58	1.47	1.48	1.55	1.41	1.52	1.66	1.44	1.41	1.66	1.52	1.44
		P		0.51		0.69		0.36		0.42		0.30		0.60
4	I like buying things for my family and friends	N	82	96	71	108	29	42	53	54	29	53	42	54
		M	3.94	4.53	4.04	4.41	3.62	4.33	4.11	4.69	3.62	4.11	4.33	4.69
		SD	1.85	4.53	1.69	1.72	1.95	1.44	1.78	1.63	1.95	1.78	1.44	1.63
		P		0.06		0.16		0.08		0.22		0.25		0.27

There are multiple statistically significant differences between the groups in the first statement: "I only buy what I need". First, men agree more (5.27) with the statement than women do (4.29) ( $Pr>F=0.0001$ ). This difference is more significant in Hong Kong, where First, men agree strongly with the statement (5.34) whereas women somewhat disagree (3.91) with it ( $Pr>F=0.0001$ ). Lastly, women in Finland agree (4.59) significantly more ( $Pr>F=0.04$ ) with the statement than women in Hong Kong do (3.91).

In fact, as a group, women in Hong Kong are the only ones who disagree with the statement while all the other groups at least somewhat agree.

Overall, there is no statistically significant difference between the genders in “I prefer ecological products”. In Finland, on the contrary, there is a statistically significant difference ( $Pr>F=0.03$ ) in this statement between men (4.11) and women (4.89). In addition, women in Finland agree more strongly (4.89) with the statement “I prefer ecological products” than women in Hong Kong do (4.12) ( $Pr>F=0.02$ ) and there is no statistical difference between gender in Hong Kong.

There are many statistically significant differences in the statement: “I try to avoid spending money”. Men agree more (5.29) with the statement than women (4.73) do ( $Pr>F=0.05$ ). This difference is particularly significant ( $Pr>F=0.009$ ) in Hong Kong, where men agree with the statement more strongly (5.31) than women do (4.33). There is also a difference ( $Pr>F=0.05$ ) in this statement between countries, where respondents in Finland agree with it more (5.17) than respondents in Hong Kong do (4.72). This difference is particularly significant ( $Pr>F=0.02$ ) between women as women in Finland agree more strongly (5.06) with the statement than women in Hong Kong do (4.33).

The next statement, “Shopping is a way to pass time for me”, yields the most statistical differences. First, men agree less (2.58) with the statement “Shopping is a way to pass time for me” than women (3.88) do ( $Pr>F<.0001$ ). This difference is especially significant ( $Pr>F<.0001$ ) in Finland, where men disagree (2.21) more strongly with the statement than women do (3.71). In addition, overall, respondents in Finland disagree with the statement more strongly (2.95) than respondents from Hong Kong do (3.77) ( $Pr>F=0.003$ ). This difference is particularly significant between men ( $Pr>F=0.005$ ) as men in Hong Kong disagree less (3.29) with the statement than men in Finland do (2.21).

There are a few statistically significant differences between the groups in the next statement, “I am an impulsive shopper”, as well. First, overall, men disagree more (3.11) with the statement than women (3.86) do ( $Pr>F=0.008$ ). This is particularly

significant ( $Pr > F = 0.04$ ) in Finland, where men disagree with the statement more strongly (2.96) than women do (3.71).

There are no statistically significant differences between the groups in either of the last statements: “I mostly shop online” and “I like buying things for my family and friends”. Thus, the shopping patterns of the groups do not differ with regard to these aspects.

Question S4Q3 concerns the buying behavior of the respondent. It consists of five statements: “I search the options on shelves to see if there are eco products when I shop”, “I normally just pick up a product that I like without considering the sustainability issues”, “I search for information about sustainability (e.g. Co2 footprint, product ethical issue etc.) when I purchase a product”, “I avoid buying products that are harmful to the environment”, and “I avoid buying products that are unethical”. Respondents were asked to indicate the degree to which the statements describe their buying behavior. Table 9 displays the basic statistics of the statements.

*Table 9 How well the following statements describe your buying behaviour, using a scale from 1 to 7. (1=Strongly disagree, 7=Strongly agree)*

	N	Mean	SD
I search the options on shelves to see if there are eco products when I shop	167	3.52	1.75
I normally just pick up a product that I like without considering the sustainability issues	167	4.60	1.58
I search for information about sustainability (e.g. Co2 footprint, product ethical issue etc.) when I purchase a product	167	2.78	1.53
I avoid buying products that are harmful to the environment	167	4.52	1.64
I avoid buying products that are unethical	166	4.75	1.53

Overall the respondents are not highly unanimous in their views (SD ranges from 1.53 to 1.75). The respondents overall disagree with “I search for information about sustainability (e.g. Co2 footprint, product ethical issue etc.) when I purchase a product” (2.78) and with “I search the options on shelves to see if there are eco products when I shop” (3.52). On the other hand, respondents somewhat agree with “I avoid buying products that are unethical” (4.75), “I normally just pick up a product that I like without considering the sustainability issues” (4.60) and “I avoid buying products that are harmful to the environment” (4.52).



It is quite interesting that the respondents agree most with “I avoid buying products that are unethical”, but on the other hand agree the second most with “I normally just pick up a product that I like without considering the sustainability issues”. Based on this, it seems that avoidance of unethical products occurs only when the situation is clear and well known but the respondents do not put much effort into finding out whether the product is unethical. In addition, based on the mean of the first statement (4.75) the avoidance of unethical products does not seem to be very important to the respondents.

By conducting One-Way ANOVA on S4Q3, even more differences between the manners in which women and men behave in shopping situations become visible. The results of the test are displayed in Table 10. The P-values of those tests that yield statistically significant results are **bolded** and colored red. All of the tests pass the Bartlett’s test of Homogeneity of Variance. The statements are ranked based on their means and the rank is marked in front of each statement. The higher the rank, the more the respondents agree with the statement. A notable thing is that in all but the last statement the only statistically significant differences occur between the genders overall and between the genders within Finland.

Table 10 One-Way ANOVA S4Q3

How well the following statements describe your buying behaviour, using a scale from 1 to 7. (1=Strongly disagree, 7=Strongly agree)

		Gender		Country		HK		FI		Male		Female	
		M	F	HK	FI	M	F	M	F	HK	FI	HK	FI
4 I search the options on shelves to see if there are eco products when I shop	N	77	89	62	105	26	36	51	53	26	51	36	53
	M	3.04	3.97	3.42	3.58	3.12	3.64	3.00	4.19	3.12	3.00	3.64	4.19
	SD	1.63	1.72	1.53	1.86	1.48	1.55	1.72	1.81	1.48	1.72	1.55	1.81
	P	<b>0.0008</b>		0.56		0.19		<b>0.002</b>		0.77		0.14	
2 I normally just pick up a product that I like without considering the sustainability issues	N	77	89	62	105	26	36	51	53	26	51	36	53
	M	4.92	4.30	4.87	4.44	5.12	4.69	4.82	4.04	5.12	4.82	4.69	4.04
	SD	1.47	1.62	1.53	1.59	1.56	1.51	1.42	1.65	1.56	1.42	1.51	1.65
	P	<b>0.03</b>		0.09		0.29		<b>0.02</b>		0.41		0.06	
5 I search for information about sustainability (e.g. Co2 footprint, product ethical issue etc.) when I purchase a product	N	77	89	62	105	26	36	51	53	26	51	36	53
	M	2.48	3.07	2.89	2.72	2.73	3.00	2.35	3.11	2.73	2.35	3.00	3.11
	SD	1.47	1.54	1.38	1.62	1.51	1.29	1.44	1.71	1.51	1.44	1.29	1.71
	P	<b>0.02</b>		0.51		0.45		<b>0.03</b>		0.29		0.74	
3 I avoid buying products that are harmful to the environment	N	77	89	62	105	26	36	51	53	26	51	36	53
	M	4.29	4.76	4.65	4.45	4.38	4.83	4.24	4.72	4.38	4.24	4.83	4.72
	SD	1.57	1.64	1.51	1.72	1.50	1.50	1.62	1.74	1.50	1.62	1.50	1.74
	P	<b>0.02</b>		0.45		0.25		<b>0.05</b>		0.70		0.74	
1 I avoid buying products that are unethical	N	76	89	61	105	25	36	51	53	25	51	36	53
	M	4.47	5.01	5.03	4.59	4.52	5.39	4.45	4.75	4.52	4.45	5.39	4.75
	SD	1.51	1.51	1.44	1.57	1.42	1.36	1.57	1.57	1.42	1.57	1.36	1.57
	P	<b>0.04</b>		0.07		<b>0.02</b>		0.37		0.85		<b>0.05</b>	

The most statistically significant differences between the groups occur in the first statement: “I search the options on shelves to see if there are eco products when I shop”. First, men disagree more strongly (3.04) with the statement than women do (3.97) ( $P_{>F}=0.0008$ ). However, it is notable that women too disagree at least somewhat with the, which does not indicate strong a likelihood towards considering sustainability issues. Here again the differences between genders are especially significant in Finland, where women agree more (4.19) with “I search the options on shelves to see if there are eco products when I shop” than men do (3.00) ( $P_{>F}=0.002$ ). In fact, women in Finland is the only group that scores above 4 in the first statement. Thus, they are the only respondents who somewhat agree with “I search the options on shelves to see if there are eco products when I shop”. On the other hand, men in Finland as a group disagree with the statement the strongest.

The trend continues in the second statement, “I normally just pick up a product that I like without considering the sustainability issues”, with which men agree more strongly (4.92) with than women do (4.30) ( $P_{>F}=0.03$ ). The difference is again particularly significant ( $P_{>F}=0.02$ ) in Finland where, men agree more (4.82) with the statement than women do (4.04). Here again, however, it is worth mentioning that women agree

with the statement to some extent as well, which indicates they do not consider sustainability issues very actively either.

Next, men disagree more strongly (2.48) with “I search for information about sustainability when I purchase a product” than women do (3.07) ( $Pr>F=0.02$ ). Once again there is a significant difference in Finland, where women disagree less strongly (3.11) with the statement than men do (2.35) ( $Pr>F=0.03$ ). Again, there is no statistically significant difference between genders within Hong Kong.

The results are similar with the next statement: “I avoid buying products that are harmful to the environment”. Women also agree more strongly (4.76) with the statement than men do (4.29) ( $Pr>F=0.02$ ). Again, the difference is more significant ( $Pr>F=0.05$ ) in Finland, where women agree more strongly (4.72) with the statement than men do (4.24).

The results of the last statement make an exception. Overall, women again agree more strongly (5.01) with “I avoid buying products that are unethical” than men do (4.47) ( $Pr>F=0.04$ ). Interestingly, however, this is the only statement that yields a statistical difference between genders within Hong Kong ( $Pr>F=0.02$ ), where women agree with the statement more strongly (5.39) than men do (4.52), and no statistically significant difference in Finland. Here there is a statistically significant difference ( $Pr>F=0.05$ ) between women in the two countries in the statement, where women from Hong Kong agree with the statement more strongly (5.39) than women from Finland do (4.75).

Question S4Q4 looks into whether how responsibly the company behaves is an aspect in the respondents’ buying decisions. It consist of five statements: “I would pay more to buy products from a socially responsible company”, “I consider the ethical reputation of businesses when I shop”, “I avoid buying products from companies that have engaged in immoral actions”, “I would pay more to buy products from companies that show care for the well-being of our society”, and “If the price and quality of two products are the same, I would buy from a firm that has a socially responsible reputation”.

Respondents were asked to state the level to which they agree or disagree with each statement. Table 11 displays the basic statistics of the statements.

*Table 11 Please rate the following statements on a scale from 1=strongly disagree to 7=strongly agree.*

	N	Mean	SD
I would pay more to buy products from a socially responsible company	166	4.41	1.52
I consider the ethical reputation of businesses when I shop	166	4.38	1.43
I avoid buying products from companies that have engaged in immoral actions	166	4.78	1.49
I would pay more to buy products from companies that show care for the well-being of our society	166	4.52	1.51
If the price and quality of two products are the same, I would buy from a firm that has a socially responsible reputation	165	6.03	1.33

Overall, the respondents highly agree with “If the price and quality of two products are the same, I would buy from a firm that has a socially responsible reputation” (6.03) and are the most unanimous in this view as well (SD=1.33). Respondents also agree somewhat with the other statements, “I avoid buying products from companies that have engaged in immoral actions” (4.78), “I would pay more to buy products from companies that show care for the well-being of our society” (4.52), “I would pay more to buy products from a socially responsible company” (4.41) and “I consider the ethical reputation of businesses when I shop” (4.38), but are not highly unanimous in their views (SD ranges from 1.43 to 1.52).

Conducting One-Way ANOVA to S4Q4 yields no significant differences between the genders overall. All the results of the test are displayed in Table 12. Not all tests pass the Bartlett’s Test for Homogeneity of Variance. Thus, even though there seems to be statistically significant differences between how the tested groups answered to the statements, these results are not reliable and are not included in the analysis. In the table the P-value of those tests that show statistical significance are **bolded** and colored red and those tests that do not pass Bartlett’s test of Homogeneity of Variance are **bolded** and *italicized*. The statements are ranked based on their means and the rank is marked in front of each statement. The higher the rank, the more the respondents agree with the statement.

Table 12 One-Way ANOVA S4Q4

Please rate the following statements on a scale from 1=strongly disagree to 7=strongly agree.

		Gender		Country		HK		FI		Male		Female	
		M	F	HK	FI	M	F	M	F	HK	FI	HK	FI
4 I would pay more to buy products from a socially responsible company	N	73	92	62	104	22	40	51	52	22	51	40	52
	M	4.41	4.40	4.34	4.45	4.18	4.43	4.51	4.38	4.18	4.51	4.43	4.38
	SD	1.47	1.57	1.32	1.63	1.26	1.36	1.55	1.73	1.26	1.55	1.36	1.73
	P	0.93		0.64		0.49		0.88		0.39		0.90	
5 I consider the ethical reputation of businesses when I shop	N	73	92	62	104	22	40	51	52	22	51	40	52
	M	4.29	4.46	4.68	4.20	4.77	4.63	4.08	4.33	4.77	4.08	4.63	4.33
	SD	1.35	1.50	1.25	1.50	1.11	1.33	1.40	1.62	1.11	1.40	1.33	1.62
	P	0.73		<b>0.04</b>		0.66		0.70		<b>0.04</b>		0.35	
2 I avoid buying products from companies that have engaged in immoral actions	N	73	92	62	104	22	40	51	52	22	51	40	52
	M	5.00	4.62	5.06	4.62	5.45	4.85	4.80	4.44	5.45	4.80	4.85	4.44
	SD	1.54	1.44	1.27	1.58	1.01	1.35	1.69	1.49	1.01	1.69	1.35	1.49
	P	0.23		0.06		0.07		0.48		<b>0.10</b>		0.18	
3 I would pay more to buy products from companies that show care for the well-being of our society	N	73	92	62	104	22	40	51	52	22	51	40	52
	M	4.79	4.29	4.40	4.60	4.59	4.30	4.88	4.29	4.59	4.88	4.30	4.29
	SD	1.39	1.57	1.46	1.54	1.18	1.60	1.48	1.56	1.18	1.48	1.60	1.56
	P	0.07		0.43		0.46		0.10		0.42		0.97	
1 If the price and quality of two products are the same, I would buy from a firm that has a socially responsible reputation	N	73	91	62	103	22	40	51	51	22	51	40	51
	M	6.04	6.01	5.77	6.18	6.09	5.60	6.02	6.33	6.09	6.02	5.60	6.33
	SD	1.25	1.39	1.21	1.38	0.81	1.35	1.41	1.35	0.81	1.41	1.35	1.35
	P	0.76		<b>0.05</b>		<b>0.13</b>		0.44		<b>0.83</b>		<b>0.01</b>	

There are no statistical differences in the first, third and fourth statement between any of the groups. All of the groups somewhat agree with “I would pay more to buy products from a socially responsible company” and “I would pay more to buy products from companies that show care for the well-being of our society”.

There are no statistical differences between gender in the whole data or in either country in the second statement: “I consider the ethical reputation of the business when I shop”. Between the countries, however, there is significant differences ( $Pr>F=0.04$ ) in this statement, with which respondents from Hong Kong agree more strongly (4.68) than respondents from Finland do (4.20). This difference seems to arise from the differing views of men in particular as men in Hong Kong agree less with the statement (4.18) than men in Finland (4.51) ( $Pr>F=0.04$ ).

In the statement, “If the price and quality of two products are the same, I would buy from a firm that has a socially responsible reputation”, there are a few statistical differences between the groups. First, respondents from Finland agree with the statement more strongly (6.18) than respondents from Hong Kong do (5.77) ( $Pr>F=0.05$ ). Between women in Hong Kong (5.60) and women in Finland (6.33) there is a statistical difference ( $Pr>F=0.01$ ), which supports the previous interpretations that

there are cultural differences in the levels to which women consider sustainability issues when buying.

#### 4.4.2 Views of sustainability in general and in the forest industry

Next, questions S3Q4, S5Q1, S5Q2 and S5Q3 are analyzed to answer the first sub-question, how do consumers view sustainability in general and in the forest industry specifically today and in the future. The analysis starts with question S3Q4, which concerns the respondents' views of how important different aspects of sustainability are in relation to business related to sustainable development. The question consists of six aspects of sustainable development in business: "Environmental protection in general", "Preventing the climate change", "Waste and emission management", "Workers' right and working condition", "Investing on new invention that have positive social impact (e.g., in terms of caring and helping of minorities)", and "Charity or voluntary work in helping people in need". Respondents were asked to indicate how important they think each of these aspects is. Table 13 displays the basic statistics of the responses to the statements.

*Table 13 When thinking of how business is related to sustainable development, how critical are the following issues in your opinion? (1=not important at all, 7=very important)*

	N	Mean	SD
Environmental protection in general	125	5.83	1.26
Preventing the climate change	125	5.66	1.38
Waste and emission management	124	5.85	1.26
Workers' right and working condition	124	5.55	1.39
Investing on new invention that have positive social impact (e.g., in terms of caring and helping of minorities)	125	5.34	1.37
Charity or voluntary work in helping people in need	125	4.96	1.38

The respondents are not highly unanimous in their views as the standard deviation ranges from 1.26 to 1.39. All aspects are viewed as more important than not. The most important aspects to the respondents are "Waste and emission management" (5.85), "Environmental protection in general the least" (5.83) and "Preventing the climate change" (5.66), which all have to do with the environment. The issues that are more related to humans come a little behind in importance. The least important issues is "Charity or voluntary work in helping people in need" (4.96), which, however, is still considered to be important.

The results of the One-Way ANOVA test are visible in Table 14. In the table the P-value of those tests that show statistical significance are **bolded** and colored red. All the tests pass the Bartlett's test of Homogeneity of Variance. The statements are ranked based on their means and the rank is marked in front of each statement. The higher the rank, the more important the respondents consider the issue.

Table 14 One-Way ANOVA S3Q4

When thinking of how business is related to sustainable development, how critical are the following issues in your opinion? (1=not important at all, 7=very important)

		Gender		Country		HK		FI		Male		Female	
		M	F	HK	FI	M	F	M	F	HK	FI	HK	FI
2 Environmental protection in general	N	57	67	46	79	20	26	37	41	20	37	26	41
	M	5.70	5.94	5.50	6.03	5.30	5.65	5.92	6.12	5.30	5.92	5.65	6.12
	SD	1.30	1.23	1.19	1.26	1.30	1.09	1.26	1.29	1.30	1.26	1.09	1.29
	P	0.57		<b>0.02</b>		0.32		0.78		0.09		0.13	
3 Preventing the climate change	N	57	67	46	79	20	26	37	41	20	37	26	41
	M	5.60	5.75	5.43	5.80	5.20	5.62	5.81	5.83	5.20	5.81	5.62	5.83
	SD	1.37	1.39	1.28	1.43	1.40	1.17	1.33	1.51	1.40	1.33	1.17	1.51
	P	0.40		0.16		0.28		0.45		0.11		0.54	
1 Waste and emission management	N	56	67	46	78	20	26	36	41	20	36	26	41
	M	5.84	5.87	5.50	6.05	5.35	5.62	6.11	6.02	5.35	6.11	5.62	6.02
	SD	1.28	1.25	1.21	1.25	1.39	1.06	1.14	1.35	1.39	1.14	1.06	1.35
	P	0.79		<b>0.02</b>		0.47		0.67		<b>0.03</b>		0.20	
4 Workers' rights and working conditions	N	57	66	45	79	20	25	37	41	20	37	25	41
	M	5.40	5.70	5.40	5.63	5.25	5.52	5.49	5.80	5.25	5.49	5.52	5.80
	SD	1.47	1.30	1.32	1.42	1.48	1.94	1.48	1.36	1.48	1.48	1.19	1.36
	P	0.27		0.37		0.50		0.32		0.57		0.39	
5 Investing in new inventions that have positive social impact	N	57	67	46	79	20	26	37	41	20	37	26	41
	M	5.35	5.34	4.96	5.57	4.85	5.04	5.62	5.54	4.85	5.62	5.04	5.54
	SD	1.37	1.40	1.21	1.42	1.27	1.18	1.36	1.50	1.27	1.36	1.18	1.50
	P	0.97		<b>0.02</b>		0.61		0.89		<b>0.04</b>		0.16	
6 Charity or voluntary work in helping people in need	N	57	67	46	79	20	26	37	41	20	37	26	41
	M	4.65	5.24	4.87	5.01	4.85	4.88	4.54	5.46	4.85	4.54	4.88	5.46
	SD	1.46	1.26	1.33	1.41	1.46	1.24	1.46	1.23	1.46	1.46	1.24	1.23
	P	<b>0.05</b>		0.58		0.93		<b>0.01</b>		0.45		0.07	

Both men and women put high importance on most of the endings. The means of both genders' answers to all the statements are above 5 and there are no statistically significant differences between the genders overall or in either country, except for the last statement.

The first issue, "Environmental protection in general" yields only one statistically significant result. Respondents from Finland rate the importance (6.03) "environmental protection in general" higher than respondents from Hong Kong do (5.50) ( $Pr > F = 0.02$ ).

The next issue, “Preventing the climate change”, does not yield any statistically significant differences. Thus, all respondents are unanimous in the view that this is an important issue for business in relation to sustainable development.

The third issue, “Waste and emission management”, yields some statistically significant differences between the groups. This importance of this issue is ranked highest overall. The first difference rises between the countries as respondents in Finland consider the issue more important (6.05) than respondents in Hong Kong do (5.50) ( $Pr>F=0.02$ ). This difference is more significant between men ( $Pr>F=0.03$ ) as men in Finland view the issue as more important (6.11) than men in Hong Kong do (5.35).

The next issue, “Workers’ rights and working conditions”, does not yield any statistically significant differences between the groups.

The issue “Investing in new inventions that have positive impact” yields similar results as the two above-mentioned issues that have yielded statistically significant differences between the groups. Respondents from Finland consider the issue more important (5.57) than respondents from Hong Kong do (4.96) ( $Pr>F=0.02$ ). The difference is again particularly significant ( $Pr>F=0.04$ ) between men as men in Finland consider the issue more important (5.62) than men in Hong Kong do (4.85).

The last issue “Charity or voluntary work in helping people in need” is the only issue that yield a difference between genders. Women put higher importance (5.24) on the issue than men do (4.65) ( $Pr>F=0.05$ ). This is particularly true in Finland, where there is a statistically significant difference ( $Pr>F=0.01$ ) in the issue which as women consider more important (5.46) than men do (4.54).

In question S5Q1, the same aspects of sustainable development in business as in the previous question are asked in the context of forest industry, thus “When you think of forest-based business (e.g. logging and paper pulping), how important are these sustainability issues in your opinion?”. The basic statistics of the responses to the statements and displayed in Table 15.



Table 15 When you think of forest-based business (e.g. logging and paper pulping), how important are these sustainability issues in your opinion? (1=not important at all, 7=very important)

	N	Mean	SD
Environmental protection in general	175	5.60	1.42
Preventing the climate change	175	5.59	1.33
Waste and emission management	175	5.73	1.29
Workers' right and working condition	175	5.52	1.36
Investing on new invention that have positive social impact (e.g., in terms of caring and helping of minorities)	171	5.17	1.48
Charity or voluntary work in helping people in need	171	4.87	1.56

As before, the respondents view all the aspects at least somewhat important but are less unanimous than in the previous question (SD ranges from 1.29 to 1.56, compared to from 1.26 to 1.39). Overall, the ranking of the aspects' importance is the same as before but all the aspects are valued a bit lower in this question than in the previous more general one. The same aspects are viewed as most important in the forest industry as in the overall business, but the importance overall is rated a bit lower: "Waste and emission management" (5.73 compared to 5.85) and "Environmental protection in general" (5.60 compared to 5.83). "Charity or voluntary work in helping people in need" is valued lowest but still somewhat important (4.87 compared to 4.96).

The results of the One-Way ANOVA test are available in Table 16. Not all tests pass the Bartlett's Test for Homogeneity of Variance. Thus, even though there seems to be statistically significant differences between how the tested groups answered to the statements, these results are not reliable and are not included in the analysis. In the table the P-value of those tests that show statistical significance are **bolded** and colored red and those that do not pass Bartlett's test of Homogeneity of Variance are **bolded** and *italicized*. The statements are ranked based on their means and the rank is marked in front of each statement. The higher the rank, the more important the respondents consider the issue.

Table 16 One-Way ANOVA S5Q1

When you think of forest-based business (e.g. logging and paper pulping), how important are these sustainability issues in your opinion? (1=not important at all, 7=very important)

		Gender		Country		HK		FI		Male		Female	
		M	F	HK	FI	M	F	M	F	HK	FI	HK	FI
2 Environmental protection in general	N	79	95	67	108	26	41	53	54	26	53	41	54
	M	5.46	5.73	5.51	5.66	5.46	5.54	5.45	5.87	5.46	5.45	5.54	5.87
	SD	1.47	1.37	1.43	1.41	1.48	1.43	1.49	1.32	1.48	1.49	1.43	1.32
	P	0.42		0.50		0.84		0.28		0.98		0.24	
3 Preventing the climate change	N	79	95	67	108	26	41	53	54	26	53	41	54
	M	5.44	5.74	5.51	5.65	5.35	5.61	5.49	5.83	5.35	5.49	5.61	5.83
	SD	1.35	1.31	1.41	1.28	1.47	1.38	1.30	1.26	1.47	1.30	1.38	1.26
	P	0.17		0.50		0.46		0.17		0.66		0.41	
1 Waste and emission management	N	79	95	67	108	26	41	53	54	26	53	41	54
	M	5.65	5.79	5.48	5.88	5.50	5.46	5.72	6.04	5.50	5.72	5.46	6.04
	SD	1.27	1.32	1.37	1.22	1.10	1.53	1.35	1.08	1.10	1.35	1.54	1.08
	P	0.75		<b>0.05</b>		0.92		0.40		0.48		<b>0.04</b>	
4 Workers' rights and working conditions	N	79	95	67	108	26	41	53	54	26	53	41	54
	M	5.38	5.65	5.46	5.56	5.35	5.54	5.40	5.74	5.35	5.40	5.54	5.74
	SD	1.43	1.29	1.34	1.38	1.38	1.32	1.46	1.28	1.38	1.46	1.32	1.28
	P	0.22		0.66		0.58		0.23		0.88		0.45	
5 Investing in new inventions that have positive social impact	N	77	93	65	106	26	39	51	54	26	51	39	54
	M	5.05	5.26	4.95	5.30	4.92	4.97	5.12	5.46	4.92	5.12	4.97	5.46
	SD	1.40	1.54	1.44	1.49	1.38	1.50	1.42	1.55	1.38	1.42	1.50	1.55
	P	0.57		0.13		0.89		0.45		0.57		0.13	
6 Charity or voluntary work in helping people in need	N	77	93	65	106	26	39	51	54	26	51	39	54
	M	4.45	5.24	5.12	4.72	5.04	5.18	4.16	5.28	5.04	4.16	5.18	5.28
	SD	1.64	1.40	1.42	1.63	1.18	1.57	1.77	1.28	1.18	1.77	1.57	1.28
	P	<b>0.002</b>		0.10		0.70		<b>0.0008</b>		<b>0.03</b>		0.74	

In general, the respondents agree more than disagree with all the statement, as all the means are above 4. The means of the genders' answers are similar to those of S3Q4 where most exceed 5. However, there are very few statistically significant differences between the groups.

The first two issues, "Environmental protection in general" and "Preventing the climate change", do not yield any statistically significant differences. The same is true for the issues "Workers' rights and working conditions" and "Investing in new inventions that have positive social impact".

The only barely significant difference for the issue "Waste and emission management" is that respondents in Finland consider it more important (5.88) than respondents in Hong Kong do (5.48) ( $Pr>F=0.05$ ).

Between genders the only statistically significant difference is again in "charity or voluntary work in helping people in need", which women consider more important (5.24) than men do (4.45) ( $Pr>F=0.002$ ).

Question S5Q2 concerns the opinions of the overall sustainability of the forest industry. It contains five statements about the industry: “The forest industry is sustainable”, “The sustainability of the forest industry should be improved”, “The forest industry has a big impact in improving the world’s sustainability”, “In the future there will be more diversified use for wood than today”, and “I think sustainably managed forest\* is the future of forestry industry”. Respondents were asked to indicate the level to which they agree or disagree with each statement. Table 17 displays the basic statistics of the responses to the statements.

*Table 17 Please asses the following statements on scale from 1 to 7. (1=Strongly disagree, 7=Strongly agree)*

	N	Mean	SD
The forest industry is sustainable	171	4.77	1.73
The sustainability of the forest industry should be improved	171	5.33	1.64
The forest industry has a big impact in improving the world’s sustainability	149	5.64	1.30
In the future there will be more diversified use for wood than today	150	5.51	1.31
I think sustainably managed forest* is the future of forestry industry	150	5.72	1.30

First, it is notable that the response rate drops after the first two statements. As the amount of respondents drops the views of the respondent become more unanimous (compare SD in the first two statements 1.64 and 1.73 to the last three 1.30, 1.31 and 1.31). Overall, the respondents agree with all the statements. They agree most with “I think sustainably managed forest\* is the future of forestry industry” (5.72) and least with “The forest industry is sustainable” (4.77).

Table 18 displays the results of the One-Way ANOVA to the statements. Again, not all tests pass the Bartlett’s Test for Homogeneity of Variance. Thus, even though there seems to be statistically significant differences between how the tested groups answered to the statements, these results are not reliable and are not included in the analysis. In the table the P-value of those tests that show statistical significance are **bolded** and colored red and those that do not pass Bartlett’s test of Homogeneity of Variance are **bolded** and *italicized*. The statements are ranked based on their means and the rank is marked in front of each statement. The higher the rank, the more the respondents agree with the statement.

Table 18 One-Way ANOVA S5Q2

Please assess the following statements on scale from 1 to 7. (1=Strongly disagree, 7=Strongly agree)

		Gender		Country				HK		FI		Male		Female	
		M	F	HK	FI	M	F	M	F	HK	FI	HK	FI		
5 The forest industry is sustainable	N	77	93	65	106	26	39	51	54	26	51	39	54		
	M	4.78	4.76	4.35	5.03	4.65	4.15	4.84	5.20	4.65	4.84	4.15	5.20		
	SD	1.83	1.66	1.77	1.66	1.90	1.68	1.82	1.52	1.90	1.82	1.68	1.52		
	P	0.99		<b>0.01</b>		0.27		0.54		0.67		<b>0.002</b>			
4 The sustainability of the forest industry should be improved	N	77	93	65	106	26	39	51	54	26	51	39	54		
	M	5.35	5.31	4.80	5.66	4.92	4.72	5.57	5.74	4.92	5.57	4.72	5.74		
	SD	1.62	1.67	1.86	1.40	1.90	1.85	1.45	1.39	1.90	1.45	1.85	1.39		
	P	0.91		<b>0.0008</b>		0.67		0.80		0.10		<b>0.003</b>			
2 The forest industry has a big impact in improving the world's sustainability	N	68	80	51	98	22	29	46	51	22	46	29	51		
	M	5.65	5.66	5.45	5.74	5.59	5.34	5.67	5.84	5.59	5.67	5.34	5.84		
	SD	1.37	1.24	1.30	1.29	1.33	1.29	1.40	1.19	1.33	1.40	1.29	1.19		
	P	0.45		0.19		0.51		0.33		0.82		0.08			
3 In the future there will be more diversified use for wood than today	N	69	80	51	99	22	29	47	51	22	47	29	51		
	M	5.62	5.43	5.29	5.62	5.36	5.24	5.74	5.53	5.36	5.74	5.24	5.53		
	SD	1.36	1.27	1.30	1.31	1.47	1.18	1.31	1.32	1.47	1.31	1.18	1.32		
	P	0.34		0.16		0.74		0.34		0.28		0.33			
1 I think sustainably managed forest* is the future of forestry industry	N	69	80	51	99	22	29	47	51	22	47	29	51		
	M	5.70	5.76	5.71	5.73	5.73	5.69	5.68	5.80	5.73	5.68	5.69	5.80		
	SD	1.39	1.22	1.04	1.42	1.08	1.04	1.52	1.33	1.08	1.52	1.04	1.33		
	P	0.40		<b>0.92</b>		0.90		0.44		0.90		0.69			

Generally, all groups agree more than disagree with all the statements with all the means being above 4 and even above 5 for the last three statements. There are no statistically significant differences between any groups in three of the statements: “The forest industry has a big impact in improving the world’s sustainability”, “In the future there will be more diversified use for wood than today”, and “I think sustainably managed forest\* is the future of forestry industry”.

The first statement, “The forest industry is sustainable”, yields two statistically significant results. Respondents in Finland agree more (5.03) with the statement than respondents in Hong Kong do (4.35) ( $Pr>F=0.01$ ). In addition, women in Finland agree more (5.20) with “The forest industry is sustainable” than women in Hong Kong do (4.15) ( $Pr>F=0.002$ ).

The second statement, “The sustainability of the forest industry should be improved”, yields a difference between the women in the two countries as well. Women in Finland agree more (5.74) with the statement than women in Hong Kong do (4.72) ( $Pr>F=0.003$ ).

Question S5Q3 consists of more detailed statements about sustainability in the forest industry than the previous question did. It consists of 13 statements that concern

specific aspects of the industry: “Compared to other natural resource based industries (mining, oil and gas), the forest industry has invested a lot to improve its sustainability”, “Compared to other industries, the forest industry’s environmental performance is weak”, “Forest industry has a weak reputation for social issues”, “In general, forest industry does not violate labour rights in developing countries”, “The actions of forest industry decrease the quality of life of local people”, “The forest based products are in general sustainable, since wood is renewable material”, “Activities of forest industry has negative impact on forest biodiversity”, “The resource efficiency of the forest industry is low”, “The energy efficiency of the forest industry is low”, “The way forest industry is using water resources is unsustainable”, “Forest industry emissions decreases the quality of air”, “Forest based products are carbon neutral”, and “Wood from tropical plantation is more sustainable than wood from boreal forest”. Respondents were asked to indicate how strongly they agree or disagree with each statement. As there are statements that concern forest-based products specifically, the results are also partly related to the second sub-question. The analyses of all the statements will be done here, however, and the statements concerning products will be later used in answering the last question. Table 19 displays the basic statistics of the responses to the statements.

Table 19 Please answer these questions based on the knowledge, belief, or image that you have of forest industry. (1=strongly disagree, 7=strongly agree)

	N	Mean	SD
Compared to other natural resource based industries (mining, oil and gas), the forest industry has invested a lot to improve its sustainability	149	4.83	1.31
Compared to other industries, the forest industry's environmental performance is weak	149	3.72	1.52
Forest industry has a weak reputation for social issues	149	4.38	1.37
In general, forest industry does not violate labour rights in developing countries	149	3.81	1.38
The actions of forest industry decrease the quality of life of local people	149	4.09	1.39
The forest based products are in general sustainable, since wood is renewable material	147	4.40	1.52
Activities of forest industry has negative impact on forest biodiversity	149	5.03	1.41
The resource efficiency of the forest industry is low	148	3.97	1.32
The energy efficiency of the forest industry is low	147	4.02	1.33
The way forest industry is using water resources is unsustainable	149	4.18	1.20
Forest industry emissions decreases the quality of air	149	4.22	1.24
Forest based products are carbon neutral	149	3.93	1.35
Wood from tropical plantation is more sustainable than wood from boreal forest	149	3.55	1.63

Overall, the means of most statements are quite close to the value 4, which is “Neither agree or disagree”. The respondents agree most with “Activities of forest industry has negative impact on forest biodiversity” (5.03), but are not unanimous in this view (SD=1.41). They also somewhat agree with “Compared to other natural resource based industries (mining, oil and gas), the forest industry has invested a lot to improve its sustainability” (4.83) and are a bit more unanimous in this view (1.31). The respondents disagree most with “Wood from tropical plantation is more sustainable than wood from boreal forest” (3.55), but are not very unanimous in this view (SD=1.63).

Table 20 displays the results of the One-Way ANOVA of the statements. Again, not all tests pass the Bartlett's Test for Homogeneity of Variance. These tests, even if seemingly significant, are again excluded from the analysis. In the table the P-value of those tests that show statistical significance are **bolded** and colored red and those that do not pass Bartlett's test of Homogeneity of Variance are **bolded** and *Italicized*. The statements are ranked based on their means and the rank is marked in front of each statement. The higher the rank, the more the respondents agree with the statement.

Table 20 One-Way ANOVA S5Q3

Please answer these questions based on the knowledge, belief, or image that you have of forest industry. (1=strongly disagree, 7=strongly agree)

		Gender		Country		HK		FI		Male		Female	
		M	F	HK	FI	M	F	M	F	HK	FI	HK	FI
2 Compared to other natural resource based industries (mining, oil and gas), the forest industry has invested a lot to improve its sustainability	N	68	80	52	97	22	30	46	50	22	46	30	50
	M	4.69	4.95	4.37	5.07	4.23	4.47	4.91	5.24	4.23	4.91	4.47	5.24
	SD	1.40	1.23	1.16	1.32	1.48	0.86	1.31	1.33	1.48	1.31	0.86	1.33
	P	0.40		<b>0.002</b>		<b>0.47</b>		0.35		0.06		<b>0.006</b>	
12 Compared to other industries, the forest industry's environmental performance is weak	N	68	80	52	97	22	30	46	50	22	46	30	50
	M	3.79	3.66	4.71	3.20	4.86	4.60	3.28	3.10	4.86	3.82	4.60	3.10
	SD	1.60	1.46	1.42	1.29	1.61	1.28	1.33	1.27	1.61	1.33	1.28	1.27
	P	0.86		<b>&lt;0.0001</b>		0.51		0.65		<b>&lt;0.0001</b>		<b>&lt;0.0001</b>	
4 Forest industry has a weak reputation for social issues	N	68	80	52	97	22	30	46	50	22	46	30	50
	M	4.47	4.11	4.75	4.02	5.18	4.43	4.13	3.92	5.18	4.13	4.43	3.92
	SD	1.49	1.26	1.27	1.37	1.33	1.14	1.45	1.31	1.33	1.45	1.14	1.31
	P	0.28		<b>0.002</b>		<b>0.03</b>		0.76		<b>0.006</b>		0.078	
11 In general, forest industry does not violate labour rights in developing countries	N	68	80	52	97	22	30	46	50	22	46	30	50
	M	3.75	3.85	3.88	3.76	3.95	3.83	3.62	3.86	3.95	3.65	3.83	3.86
	SD	1.53	1.24	1.18	1.47	1.36	1.05	1.61	1.36	1.36	1.61	1.05	1.36
	P	0.90		0.61		0.72		0.78		0.45		0.93	
7 The actions of forest industry decrease the quality of life of local people	N	67	79	52	95	22	30	45	49	22	45	30	49
	M	3.84	4.30	4.69	3.76	4.73	4.67	3.40	4.08	4.73	3.40	4.67	4.08
	SD	1.55	1.22	1.11	1.43	1.03	1.18	1.59	1.20	1.03	1.59	1.18	1.20
	P	<b>0.13</b>		<b>&lt;0.0001</b>		0.85		0.07		<b>0.0007</b>		<b>0.04</b>	
3 The forest based products are in general sustainable, since wood is renewable material	N	68	80	52	97	22	30	46	50	22	46	30	50
	M	4.76	4.10	4.21	4.51	4.73	3.83	4.78	4.26	4.73	4.78	3.83	4.26
	SD	1.48	1.50	1.50	1.52	1.61	1.32	1.43	1.59	1.61	1.43	1.32	1.59
	P	<b>0.03</b>		0.26		<b>0.03</b>		0.23		0.89		0.22	
1 Activities of forest industry has negative impact on forest biodiversity	N	67	80	51	97	21	30	46	50	21	46	30	50
	M	4.94	5.13	5.53	4.77	5.57	5.50	4.65	4.90	5.57	4.65	5.50	4.90
	SD	1.58	1.26	1.08	1.50	1.08	1.11	1.70	1.30	1.08	1.70	1.11	1.30
	P	<b>0.56</b>		<b>0.002</b>		0.82		0.63		<b>0.03</b>		<b>0.04</b>	
9 The resource efficiency of the forest industry is low	N	66	80	51	96	21	30	45	50	21	45	30	50
	M	3.98	3.96	4.57	3.66	4.86	4.37	3.58	3.72	4.86	3.58	4.37	3.72
	SD	1.50	1.16	1.20	1.27	1.15	1.22	1.48	1.07	1.15	1.48	1.15	1.22
	P	0.99		<b>&lt;0.0001</b>		0.15		<b>0.83</b>		<b>0.0009</b>		<b>0.02</b>	
8 The energy efficiency of the forest industry is low	N	68	80	52	97	22	30	46	50	22	46	30	50
	M	3.96	4.08	4.63	3.69	4.68	4.60	3.61	3.76	4.68	3.61	4.60	3.76
	SD	1.53	1.16	1.22	1.28	1.43	1.07	1.47	1.10	1.43	1.47	1.07	1.10
	P	<b>0.87</b>		<b>&lt;0.0001</b>		0.81		<b>0.82</b>		<b>0.006</b>		<b>0.001</b>	
6 The way forest industry is using water resources is unsustainable	N	68	80	52	97	22	30	46	50	22	46	30	50
	M	4.07	4.28	4.23	4.15	4.23	4.23	4.00	4.30	4.23	4.00	4.23	4.30
	SD	1.43	0.97	1.25	1.18	1.57	0.97	1.37	0.97	1.57	1.37	0.97	0.97
	P	<b>0.59</b>		0.71		<b>0.99</b>		<b>0.46</b>		0.54		0.77	
5 Forest industry emissions decreases the quality of air	N	68	80	52	97	22	30	46	50	22	46	30	50
	M	4.40	4.45	4.67	4.29	4.64	4.70	4.28	4.30	4.63	4.28	4.70	4.30
	SD	1.41	1.10	1.17	1.27	1.36	1.02	1.42	1.13	1.36	1.42	1.02	1.13
	P	<b>0.91</b>		0.07		0.85		0.97		0.34		0.12	
10 Forest based products are carbon neutral	N	68	80	52	97	22	30	46	50	22	46	30	50
	M	4.06	3.83	4.29	3.74	4.68	4.00	3.76	3.72	4.68	3.76	4.00	3.72
	SD	1.60	1.11	1.23	1.39	1.43	0.98	1.61	1.18	1.43	1.61	0.98	1.18
	P	<b>0.58</b>		<b>0.02</b>		<b>0.05</b>		<b>0.97</b>		<b>0.03</b>		0.28	
13 Wood from tropical plantation is more sustainable than wood from boreal forest	N	68	80	52	97	22	30	46	50	22	46	30	50
	M	3.60	3.50	4.46	3.06	4.55	4.40	3.15	2.96	4.55	3.15	4.40	2.96
	SD	1.70	1.58	1.21	1.61	1.44	1.04	1.65	1.60	1.44	1.65	1.04	1.60
	P	0.90		<b>&lt;0.0001</b>		0.67		0.72		<b>0.001</b>		<b>&lt;0.0001</b>	

There is only one statistically significant difference in the first statement: "Compared to other natural resource based industries, the forest industry has invested a lot to

improve its sustainability". Respondents in Finland agree more (5.07) with the statement than respondents in Hong Kong do (4.37) ( $Pr > F = 0.002$ ).

The second statement, "Compared to other industries, the forest industry's environmental performance is weak", yields more statistical differences. First, respondents in Finland disagree (3.20) with statement whereas respondents in Hong Kong somewhat agree (4.71) with it ( $Pr > F < 0.0001$ ). This difference is clear between the countries in both genders. Men in Finland disagree (3.28) with the statement whereas men in Hong Kong somewhat agree (4.86) with it ( $Pr > F < 0.0001$ ). Women in Finland also disagree (3.10) with the statement whereas women in Hong Kong agree (4.60) ( $Pr > F < 0.0001$ ).

The third statement, "Forest industry has a weak reputation for social issues", also yield a significant difference between the countries. Respondents in Hong Kong agree more (4.75) with the statement than respondents in Finland do (4.02) ( $Pr > F = 0.002$ ). The difference seems to rise from the opinions of men. Within Hong Kong, the difference is significant between genders as men in Hong Kong agree more (5.18) with the statement than women do (4.43) ( $Pr > F = 0.03$ ). In addition, men in Hong Kong agree more (5.18) with the statement than men in Finland do (4.13) ( $Pr > F = 0.006$ ).

All the groups disagree with the next statement, "In general, forest industry does not violate labour rights in developing countries", to at least some extent as the means drop below 4, which indicates that the respondents do not see the forest industry as behaving completely justly towards workers. There are no statistically significant differences between the groups.

The only statistically significant difference between the groups in the next statement, "The actions of forest industry decrease the quality of life of local people", is between the women of the two countries. Women in Hong Kong agree more (4.67) with the statement than women in Finland do (4.08) ( $Pr > F = 0.04$ ).

The only statistically significant difference between genders arises in "The forest based products are in general sustainable, since wood is renewable material". Men agree more (4.76) with the statement than women do (4.10) ( $Pr > F = 0.03$ ). The difference



between genders is significant particularly in Hong Kong. Women in Hong Kong disagree somewhat (3.83) with the statement whereas men agree (4.73) with it ( $Pr > F = 0.03$ ).

The only statistically significant difference in “Activities of forest industry has negative impact on forest biodiversity” rises between the women of the two countries. Women in Hong Kong agree more (5.50) with the statement than women in Finland do (4.90) ( $Pr > F = 0.04$ ). Overall, respondents agree with this statement the most.

The results of the statement “The resource efficiency of the forest industry is low” resemble those of the second statement. Respondents in Finland disagree (3.66) with the statement whereas respondents in Hong Kong agree (4.57) with it ( $Pr > F < 0.0001$ ). The differences are significant within each gender. Men in Finland somewhat disagree (3.58) with the statement whereas men in Hong Kong somewhat agree (4.86) ( $Pr > F = 0.0009$ ). Women in Finland also somewhat disagree (3.72) with the statement whereas women in Hong Kong somewhat agree (4.37) with it ( $Pr > F = 0.02$ ).

The results of the next statement, “The energy efficiency of the forest industry is low”, follow the trend. Respondents in Finland disagree (3.69) with the statement whereas respondents in Hong Kong agree (4.63) with it ( $Pr > F < 0.0001$ ). Again, the differences rise between the countries within both genders. Men in Finland also somewhat disagree (3.61) with the statement whereas men in Hong Kong somewhat agree (4.68) ( $Pr > F = 0.006$ ). Women in Finland also somewhat disagree (3.76) with the statement whereas women in Hong Kong agree (4.60) with it ( $Pr > F = 0.001$ ).

The next two statements, “The way forest industry is using water resources is unsustainable” and “Forest industry emissions decreases the quality of air”, do not yield any statistically significant results. Overall, respondents agree with the second statement a bit stronger than the first one in which the means of some groups drop to 4, which indicates that the respondents neither agree or disagree.

The statements “The way forest industry is using water resources is unsustainable” and “Forest industry emissions decreases the quality of air” do not yield any statistically significant differences between the groups.

Differences between the countries rise again in “Forest based products are carbon neutral”. Respondents in Finland somewhat disagree (3.74) with the statement whereas respondents in Hong Kong somewhat agree (4.29) with it ( $Pr > F = 0.02$ ). Within Hong Kong, the views of genders are significantly different as well. Men in Hong Kong agree (4.68) with the statement whereas women are unsure how they feel (4.00) ( $Pr > F = 0.05$ ). The men of the two countries have also differing views as men in Finland somewhat disagree (3.76) with the statement and men in Hong Kong agree (4.68) with it ( $Pr > F = 0.03$ ).

Lastly, men in Finland somewhat disagree (3.15) with the statement “Wood from tropical plantation is more sustainable than wood from boreal forest” whereas men in Hong Kong somewhat agree (4.55) with it ( $Pr > F = 0.001$ ).

#### 4.4.3 Views of ecological forest-based products

The second sub-question – how do consumers view ecological forest-based products – is answered by analyzing question S6Q2. The question is divided into two product groups, paper products and wooden furniture. These groups were chosen to represent forest-based products because they are likely to be familiar to the respondents. The same nine statements are made of each group: “When buying these types of products I do not usually consider their sustainability”, “The ecological product is more expensive than its normal alternative”, “The ecological product is of better quality than its normal alternative”, “The ecological product is of lesser quality than its normal alternative”, “There are not enough ecological choices for this product”, “When there is an ecological alternative available I prefer it over the normal product”, “The ecological choices for this product are not conveniently available to me”, “I do not know where to look for ecological options for this product”, and “I would be willing to pay more for the ecological than the normal alternative of these types of products”.

This question also provides some insight to the main research question the first statements concerns the likelihood that the respondent considers ecologicalness when buying. Because the question consists of altogether 18 statements, Factor Analysis is first conducted to summarize data. The five factors formed are displayed in Table 21. The factors cover 67.9% of the data, which is a satisfying result. The data of those

statements that have negative values in the factors are turned before the final summarized variables are formed.

*Table 21 Factor Analysis S6Q1*

Please indicate the degree to which you agree with the following statements about the specific product category.  
(1 = Strongly disagree, 7 = Strongly agree)

N=127 MSA=.601	F1	F2	F3	F4	F5
Paper: There are not enough ecological choices for this product.	.838				
Paper: The ecological choices for this product are not conveniently available to me.	.812				
Paper: I do not know where to look for ecological options for this product.	.615				
Furniture: There are not enough ecological choices for this product.	.637				
Furniture: The ecological choices for this product are not conveniently available to me.	.663				
Furniture: I do not know where to look for ecological options for this product.	.529				
Paper: When there is an ecological alternative available I prefer it over the normal product.		.832			
Paper: I would be willing to pay more for the ecological than the normal alternative of these types of products.		.728			
Furniture: When there is an ecological alternative available I prefer it over the normal product.		.781			
Furniture: I would be willing to pay more for the ecological than the normal alternative of these types of products.		.736			
Paper: The ecological product is of better quality than its normal alternative.			-.704		
Paper: The ecological product is of lesser quality than its normal alternative.			.773		
Furniture: The ecological product is of better quality than its normal alternative.			-.782		
Furniture: The ecological product is of lesser quality than its normal alternative.			.794		
Paper: When buying these types of products I do not usually consider their sustainability.				.724	
Furniture: When buying these types of products I do not usually consider their sustainability.				.811	
Paper: The ecological product is more expensive than its normal alternative.					.710
Furniture: The ecological product is more expensive than its normal alternative.					.805
Eigenvalue	4.31	3.08	2.47	1.22	1.14
Proportion %	24.0	17.1	13.7	6.8	6.3
Cumulative %	24.0	41.1	54.8	61.6	67.9
Cronbach Alpha	.808	.827	.785	.724	.685

The factors are named here to ease referring to them in the future. Factor 1 consists of statements concerning the availability and awareness of existence of ecological products and is thus, named Unavailability and Unawareness. The higher the mean is in a scale of 1 to 7, the more unaware of options and availability the respondents are. Factor 2 consists of statements concerning the preference of buying ecological products and willingness to pay premium for them and is thus, named Preference and Willingness to Pay. The higher the mean is in a scale of 1 to 7 the more the respondents prefer ecological products and are willing to pay for them. Factor 3 consists of statements concerning quality and is thus called Low Quality. The higher the mean is in a scale of 1 to 7, the more the respondents think ecological products are of lesser

quality. Factor 4 consists of statements concerning whether the respondent is interested in the sustainability aspect when buying a certain product and is thus named Inconsideration of Sustainability. The higher the mean on a scale of 1 to 7 the likelier the respondents are not to consider the sustainability of the product. Factor 5 consists of statements concerning the expensiveness of ecological products and is thus named Expensiveness. The higher the mean gets on a scale of 1 to 7, the more the respondents agree with ecological products being expensive.

Table 23 displays the amount of answers to each aspect as well as the means and standard deviations of each aspect. Respondents agree the most with the Expensiveness-factor (5.23) and least with the Low Quality –factor (3.52) and are quite unanimous in their views (SD 1.20 and 1.15). They agree mildly with the other factors. Thus, overall the respondents view that ecological paper and wooden furniture products are more expensive but not of lesser quality than the traditional options.

*Table 22 Please indicate the degree to which you agree with the following statements about the specific product category. (1 = Strongly disagree, 7 = Strongly agree)*

	N	Mean	SD
Unavailability and Unawareness	142	4.18	1.12
Preference and Willingness to Pay	142	4.42	1.17
Low Quality	142	3.52	1.15
Inconsideration of Sustainability	142	4.29	1.50
Expensiveness	141	5.23	1.20

The five factors are tested with One-Way ANOVA. Again, not all tests pass the Bartlett's Test for Homogeneity of Variance. All these tests are left out of the analysis. The results of the One-Way ANOVA are displayed in Table 23. In the table the P-value of those tests that show statistical significance are **bolded** and colored red and those that do not pass Bartlett's test of Homogeneity of Variance are *italicized*. The statements are ranked based on their means and the rank is marked in front of each statement. The higher the rank, the more the respondents agree with the statement.

Table 23 One-Way ANOVA S6Q1

Please indicate the degree to which you agree with the following statements about the specific product category. (1=Strongly disagree, 7=Strongly agree)

		Gender		Country		HK		FI		Male		Female	
		M	F	HK	FI	M	F	M	F	HK	FI	HK	FI
4 Unavailability and Unawareness	N	68	73	49	93	21	28	47	45	21	47	28	45
	M	4.25	4.11	4.85	3.82	4.97	4.75	3.92	3.71	4.97	3.92	4.75	3.71
	SD	1.06	1.18	0.92	1.06	0.96	0.90	0.94	1.17	0.94	0.94	0.90	1.17
	P	0.77		<b>&lt;0.0001</b>		0.43		0.62		<b>&lt;0.0001</b>		<b>0.0001</b>	
2 Preference and Willingness to Pay	N	68	73	49	93	21	28	47	45	21	47	28	45
	M	4.42	4.43	4.72	4.27	4.93	4.56	4.20	4.35	4.93	4.20	4.56	4.35
	SD	1.05	1.29	1.11	1.18	0.78	1.29	1.08	1.29	0.78	1.08	1.29	1.29
	P	0.99		<b>0.03</b>		0.26		0.83		<b>0.007</b>		0.49	
5 Low Quality	N	68	73	49	93	21	28	47	45	21	47	28	45
	M	3.77	3.30	3.62	3.47	3.71	3.56	3.79	3.13	3.71	3.79	3.56	3.13
	SD	1.13	1.15	0.98	1.23	1.06	0.93	1.16	1.24	1.06	1.16	0.93	1.24
	P	<b>0.05</b>		0.44		0.62		<b>0.04</b>		0.77		0.12	
3 Inconsideration of Sustainability	N	68	73	49	93	21	28	47	45	21	47	28	45
	M	4.79	3.83	4.65	4.09	5.48	4.04	4.49	3.70	5.48	4.49	4.04	3.70
	SD	1.23	1.58	1.44	1.50	0.86	1.50	1.26	1.63	0.86	1.26	1.50	1.63
	P	<b>0.0003</b>		<b>0.03</b>		<b>0.0003</b>		<b>0.03</b>		<b>0.002</b>		0.38	
1 Expensiveness	N	68	72	49	92	21	28	47	44	21	47	28	44
	M	5.15	5.31	5.26	5.21	5.10	5.38	5.17	5.26	5.10	5.17	5.38	5.26
	SD	1.20	1.21	1.08	1.26	1.15	1.02	1.23	1.33	1.15	1.23	1.02	1.33
	P	0.73		0.84		0.37		0.93		0.81		0.70	

There are many statistically significant differences between the groups in terms of the first aspect: "Unavailability and Unawareness". First, respondents in Hong Kong are unaware (4.85) of the ecological options available whereas respondents in Finland are somewhat aware (3.82) ( $Pr>F<0.0001$ ). The differences between countries are significant within both genders. Men in Hong Kong have a higher mean (4.97) in Unavailability and Unawareness than men in Finland do (3.92) ( $Pr>F<0.0001$ ). Likewise, women in Hong have a higher mean (4.75) in the aspect than women in Finland do (3.71) ( $Pr>F<0.0001$ ). Thus, women in Finland are the most aware and men in Hong Kong the least aware of the options and availability of ecological options.

Respondents in Hong Kong have a higher mean (4.72) in Preference and Willingness to Pay than respondents in Finland do (4.27) ( $Pr>F=0.03$ ). This difference is particularly significant between men. Men in Hong Kong have a higher mean (4.93) in this aspect than men in Finland do (4.20) ( $Pr>F=0.007$ ). Overall, men in Hong Kong are the most willing to pay premiums for ecological products and men in Finland the least willing to do so.

There are a few statistically significant differences between the groups in the aspect Low Quality. First, women disagree more (3.30) with ecological products being of

lesser quality than men do (3.77) ( $Pr > F = 0.05$ ). This difference is particularly significant in Finland where women disagree more (3.13) with the low quality than men do (3.79) ( $Pr > F = 0.04$ ). Overall, women in Finland disagree most with ecological products being of lower quality whereas men in Finland disagree the least.

Respondents in Hong Kong have a higher mean (4.65) in Inconsideration of Sustainability than respondents in Finland do (4.09) ( $Pr > F = 0.03$ ). Thus, respondents in Finland are more likely to consider sustainability issues when buying paper and wooden furniture products. The difference between genders within Finland is noticeable, however. Women in Finland have a lower mean (3.70) in Inconsideration of Sustainability than men in Finland do (4.49) ( $Pr > F = 0.03$ ). In fact, women in Finland are the only group of which the mean drops over 4, which indicates that they consider the sustainability of these products to at least some extent. Lastly, men in Hong Kong have a higher mean (5.48) in Inconsideration of Sustainability than men in Finland do (4.49) ( $Pr > F = 0.002$ ). Overall, women in Finland have the lowest mean where as women in Hong Kong have the highest mean in this aspect.

There are no statistically significant differences between the groups in the last aspect: "Expensiveness". Overall, respondents agree with ecological products being more expensive than their alternatives.

## **4.5 Summary of the results**

Here, the analyses of the previous sections are gathered together according to the research questions they answer.

### **4.5.1 The role of sustainability in buying decisions**

At first look, the valuing of sustainability issues seems to translate quite well into buying decisions as well. The majority of consumers, roughly 72%, buy ecological products. Out of women roughly 80% do so and whereas out of men only 65% do so. These numbers are only a fraction of the truth, however. It is not common that ecological products are preferred to alternatives. What is interesting is that even though there are no significant differences between genders in how important they consider different

sustainability issues to be for business, men do not buy ecological products nearly as often as women do. This supports previous finding that men are more likely to not take action even when they are aware of ethical aspects (McManus & Subramaniam, 2009, 638).

Even though the importance of sustainability issues is appreciated both considering business in general and the forest industry specifically, consumers are more likely to avoid buying from companies that are known to act immorally than pay more for the products of those companies that act responsibly. Consumers try to avoid buying unethical or environmentally harmful products but at the same time do not put effort in searching for information about the sustainability of products in general. This supports previous findings that negative CSR images have more effect on consumers' behavior than positive ones do (Bhattacharya & Sen 2004, 23) and that positive CSR performance alone does not convince consumers to become customers (Zhen & Aguilar 2014, 103). However, if price and quality factors are taken out, most consumers are highly likely to buy from a company that has a socially responsible reputation.

Consumers view price, quality and practicality as the most important aspects of both forest-based and other products. Even though ecologicalness is perceived somewhat important as well, it does not come even close to these. Thus, as suggested by previous study the key in reaching consumers lies within convincing them of practicality of products rather than their ethical attributes (Devinney 2012, 232, 234). In fact, it is quite common that consumers choose a product that appeals to them without even searching for ecological options on the shelves.

Women consider the ecologicalness of a product they buy more important than men do. This difference between genders is particularly big in Finland. Still, there is no strong evidence that women consider sustainability issues more than men do when buying. Rather women are more hesitant than men are to admit to choosing a product that appeals to them without searching for information beforehand or even options on the shelves, but still do not deny it. In addition, women try to avoid buying environmentally harmful products more than men do. These differences between genders are present in both countries studied but are particularly noticeable in Finland.

Lastly, women in Hong Kong avoid buying unethical products more than any other consumer groups in this study.

It is important to understand though that even though there are differences between women and men, their views are not opposite but rather of different strengths. In addition, there are no gender differences in whether consumers would pay more for products of a socially responsible company or even consider the reputation of the company when buying. These results support previous arguments of socio-demographic variables having at best partial explanatory power in consumers buying decisions in relation to ecological products (Panwar 2010, 29; Jansson et al. 2007, 366; D'Souza et al. 2007, 77).

Differences of both behavior and thoughts are multiple between the two studied countries, Hong Kong and Finland. Looking simply at whether consumers buy ecological products or not consumers in Hong Kong win as 74% buy such products whereas the same number for consumers in Finland is 71%. The gender differences within the countries are significant as well. In Finland, women have an 85% likelihood of buying ecological products whereas for men the likelihood is only 60%. In Hong Kong, the same number for women is 76% and men 72%. Still, this does not show in consumers in Hong Kong valuing ecologicalness of products higher than consumers in Finland do. In fact, the differences in views of importance of different aspects of products lie elsewhere. To consumers in Hong Kong, packaging and style of products at least somewhat important whereas consumers in Finland do not think it is important. This difference is bigger between the women of the two countries. Consumers in Hong Kong also consider the practicality and quality of products even more important than consumers in Finland do. This difference is especially significant between the men of the two countries.

Not many differences between the countries are visible in the buying decisions with respect to searching for information about sustainability or avoiding certain types of products. There are two exceptions. Consumers in Hong Kong consider the ethical reputation of companies more than consumers in Finland do when they are shopping. This difference is especially significant between the men of the two countries. However,



consumers in Finland are more likely to choose to buy from a company that has a socially responsible reputation when the price and quality of options are the same, which contradicts the previous result. This difference is especially big between the women of the two countries.

#### 4.5.2 Views of sustainability in general and in the forest industry

Overall, the future consumers view that environmentally related sustainability issues, such as waste and emission management and environmental protection, are more important than socially related ones, such as working conditions, both for business in general and in the forest industry. Still both environmental and social issues are considered important. This contradicts the previous finding according to which students value other aspects of CSR above environmental sustainability (Alonso-Almeida et al. 2015, 8; Lämsä et al. 2008, 54) as well as the findings that young people are most likely to value aspects that are close to them personally (Schmeltz 2011, 40). The order of importance of the sustainability issues does not differ from business general to the forest industry specifically.

The future consumers overall view that the forest industry is already quite sustainable but its sustainability should be improved even further. Forest industry is seen as an important part of improving the overall sustainability of the world and consumers believe the use of wood as a raw material will diversify in the future. Consumers also believe strongly that the future of the industry lies in sustainably managed forest. However, it seems that they do not have clear opinions concerning specific sustainability issues in the forest industry. Issues such as resource and energy efficiency and carbon neutrality of forest-based products do not evoke clear opinions. In fact, the only thing consumers seem to be sure of is that the industry influences biodiversity negatively. This supports previous findings, which claim that students have negative views about how forest industry influences biodiversity (Amberla et al. 2011, 480).

There are no differences between men and women in how important they consider specific sustainability issues in relation to business. The only exception is charity and voluntary work, which women consider more important than men do. This difference is

especially noticeable in views of sustainability in the forest industry. Women in Finland consider charity and voluntary work significantly more important than men in Finland do. Women in Finland are the loudest advocates for the importance of charity and voluntary work both for business in general and within the forest industry. This somewhat contradicts the findings of Bird et al. (2007, 203) that charity is not considered as an important part of CSR activities and that engaging in philanthropic actions may push consumers away.

Within Hong Kong, there are a few gender differences in how sustainability within forest industry is viewed. Men in Hong Kong think more than women do that the forest industry's reputation is social issues is poor. Men in Hong Kong also believe forest-based products to be carbon neutral whereas women are unsure.

What comes to issues of sustainability consumers in Finland view general environmental protection, the management of waste and emissions, and investing in inventions with positive social impact more important for businesses than consumers in Hong Kong do. In the last two issues, the difference of views is especially big between the men of the two countries. The only difference in views of importance of different sustainability issues in the forest industry between countries is that consumers in Hong Kong do not consider management of waste and emissions quite as important as consumers in Finland do. Women in Finland also believe more strongly than women in Hong Kong do that the sustainability of the industry should be approved.

Previously it has been found that there are cultural differences between USA and Finland in how the sustainability of forest industry is perceived (Amberla et al. 2011, 481). This study also reports some differences in opinions of the industry. Consumers in Hong Kong seem to be a bit more skeptical towards the sustainability of forest industry than consumers in Finland are. In their opinion, efficiency as well as the environmental performance in the industry is somewhat low whereas consumers in Finland have somewhat positive views of these issues in the industry. Consumers in Hong Kong also view even more strongly than consumers in Finland do that forest industry affects biodiversity negatively. Consumers in Finland are much more confident about the sustainability of the industry as a whole. This difference between countries

is especially big among women. The women of the two countries also have vastly differing view of improving the industry's sustainability where women in Finland see improvement much more needed than women in Hong Kong do.

#### 4.5.3 Views of ecological forest-based products

When it comes to consumers' views on forest-based products in terms of sustainability, they seem to be somewhat mixed. Consumers overall think that ecological forest-based products, in this study namely paper and wooden furniture products, are more expensive than their alternatives are. However, consumers do not perceive ecological forest-based products to be of lower quality than their alternatives are. They somewhat prefer ecological options of these products but at the same time do not consider sustainability issues all that much when buying these types of products.

Women disagree more strongly with ecological forest-based products being of lesser quality than the alternatives are. This, however, does not seem to lead in higher preference of ecological products or willingness to pay premiums for them. In addition, in Finland only, women have a higher tendency to consider sustainability issues when buying forest-based products. On the other hand, men perceive all forest-based products being generally more sustainable than women do due to the renewability of wood. This difference between genders is especially noticeable in Hong Kong, where women actually disagree with this opinion.

There are a few cultural differences in how ecological forest-based products are view by consumers. Consumers in Hong Kong are more willing to pay premiums for ecological products and prefer them to their alternatives. The difference is especially noticeable between the male consumers of the two countries. On the other hand, especially male consumers in Hong Kong state stronger than consumers in Finland do that they do not consider sustainability issues when buying, which is somewhat inconclusive with the previous finding. At the same time, consumers in Finland also somewhat prefer ecological options and are not unwilling to pay premiums either. The perceived expensive price does not seems to still somewhat be a barrier for buying ecological products, which contradicts previous findings of that consumers are willing

to pay premiums for ecological products (Devinney et al. 2012, 231; Bonini and Oppenheim 2008, 61).

However, other barriers seem to exist and consumers seem to have mixed feelings about buying ecological products. Both men and women in Hong Kong are unaware of the ecological options of forest-based products out there and feel that the ecological choices for the products are not plentiful and easily available. This supports previous findings that consumers are generally unaware of the options they have (Gleim 2013, 47; Lämsä et al. 2008, 55). Consumers in Finland feel they are somewhat aware of the options and that there are choices available to them, but are not highly confident in these views. These results are alarming as it has been found that often consumers choose the option that is easiest and closest to them (Schmeltz 2011, 40) and thus most likely are not willing to put in the effort of educating themselves of options that they do not perceive to be easily available.

## **5 CONCLUSIONS AND DISCUSSIONS**

This thesis has studied the perceptions consumers have on sustainability in relation to business in general as well as in the forest industry in particular. In this chapter, the empirical results of the research are concluded and discussed using the initial research questions, which were introduced in the first chapter of the thesis. This is done in reversed order as the two sub-questions help in answering the main research question. After this, the reliability and the validity of the study are discussed and suggestions for improvement made.

### **5.1 Discussion of the results**

How do consumers view ecological forest-based products?

The general sustainability of forest-based products divides views somewhat. Consumers are not unanimous in opinions of whether wooden products are sustainable merely based on their renewability. Men perceive this is the case more strongly than women do. Women in Hong Kong are the most skeptical towards this. In addition, men in Hong Kong have some confidence in forest-based products being carbon neutral, whereas women in Hong Kong are unsure about this and consumers disagree. If these types of products are perceived sustainable by nature, consumers might not feel the need to even look for or consider ecological options.

One barrier for buying ecological forest-based products, especially in Finland, seems to be the unawareness of options and availability. Both men and women in Hong Kong are unaware of the ecological options out there and feel that the ecological choices for the products are not plentiful and easily available. On the other hand, consumers in Finland feel they are somewhat aware of the options and that there are choices available to them. Still, the awareness is not high in Finland either. This is thus one issue that should be improved in both countries.

The clearly highest barrier for buying ecological forest-based products seems to be price, however. Consumers still feel strongly that these products are more expensive

than alternatives. The quality of these products, however, does not seem to concern consumers. Women especially do not believe in their weaker quality. This does not increase the preference of and willingness to pay premiums for these products, however, although they somewhat exist. Consumers in Hong Kong are more willing to pay premiums for ecological products and prefer them to their alternatives.

How do consumers view sustainability in general and in the forest industry specifically today and in the future?

Overall, the future consumers studied in this research view that environmentally related sustainability issues, such as waste and emission management and environmental protection, are more important than socially related ones, such as working conditions, both for business in general and in the forest industry. Still both environmental and social issues are considered important. The order of importance of the sustainability issues does not differ from business general to the forest industry specifically.

Men and women have unanimous views in how important they consider specific sustainability issues in relation to business. The only exception is charity and voluntary work, which women consider more important than men do. This difference is especially noticeable in views of sustainability in the forest industry. Women in Finland consider charity and voluntary work significantly more important than men in Finland do. Women in Finland are the loudest advocates for this issue overall.

What comes to cultural differences Finland view general environmental protection, the management of waste and emissions, and investing in inventions with positive social impact more important for businesses than consumers in Hong Kong do. In the last two issues, the difference of views is especially big between the men of the two countries. The only difference in views of importance of different sustainability issues in the forest industry between countries is that consumers in Hong Kong do not consider management of waste and emissions quite as important as consumers in Finland do. Women in Finland also believe more strongly than women in Hong Kong do that the sustainability of the industry should be approved. The role of forest industry

is seen as an important in improving the overall sustainability of the world and consumers believe the use of wood as a raw material will diversify in the future.

The industry is generally viewed already quite sustainable but its sustainability should be improved even further. However, it seems that they do not have clear opinions concerning specific sustainability issues within the industry. Issues such as resource and energy efficiency and carbon neutrality of forest-based products do not evoke clear opinions. Consumers in Hong Kong are also less optimistic of the current sustainability of forest industry than consumers in Finland are. In their opinion, efficiency as well as the environmental performance in the industry is somewhat low whereas consumers in Finland have somewhat positive views of these issues in the industry. Overall, consumers in Finland are much more confident about the sustainability of the industry as a whole. This difference between countries is especially big among women. The women of the two countries also have vastly differing view of improving the industry's sustainability where women in Finland see improvement much more needed than women in Hong Kong do.

In fact, the only thing consumers seem to be sure of is that the industry influences biodiversity negatively. This view is much stronger among consumers in Hong Kong than those in Finland. Consumers also believe strongly that the future of the industry lies in sustainably managed forest. Within Hong Kong, however, there is a gender differences in how sustainability within forest industry is viewed. Men in Hong Kong think more than women do that the forest industry's reputation is social issues is poor.

What, if any, role does sustainability have in future consumers' buying decisions?

At first look, the valuing of sustainability issues seems to translate quite well into buying decisions. The majority of consumers, especially women, buy ecological products. The buying of ecological products is more common in Hong Kong and the gap between men and women is smaller there than it is in Finland. These numbers are only a fraction of the truth, however. Overall, the most important aspect of products to consumers are price, quality and practicality. These are very important regardless of the type of product. Although ecologicalness comes third with the place of production, it leaves

merely packaging and style, which are not considered important, behind. Further, it is not common that ecological products are preferred to alternatives.

What is interesting is that even though there are no significant differences between genders in how important they consider different sustainability issues to be for business, men do not buy ecological products nearly as often as women do. This might indicate that men do not see it as their personal responsibility to further sustainability. On the other hand, although consumers in Hong Kong are more likely to buy ecological products they do not value the ecologicalness aspect of products higher than consumers in Finland do. In addition, especially male consumers in Hong Kong state stronger than consumers in Finland do that they do not consider sustainability issues when buying. Thus, it seems that ecological products are bought more by chance than intent. There may be other reasons that influence the buying of ecological products and the ecologicalness is just an added bonus that does not influence the initial decision. Thus, it is clear that ecologicalness is not a very good selling point.

Consumers try to avoid buying unethical or environmentally harmful products yet do not put effort in searching for information about the sustainability of products in general. All in all consumers are more likely to avoid buying from immorally behaving companies than to pay more premiums for products of socially responsible companies. However, if price and quality factors are taken out, most consumers are highly likely to buy from a company that has a socially responsible reputation.

Women consider the ecologicalness to be a more important aspect of a product aspect than men do. The differing views between genders are particularly big in Finland. In addition, women try to avoid buying environmentally harmful products more than men do. These differences between genders are present in both countries studied but are particularly noticeable in Finland. Lastly, women in Hong Kong avoid buying unethical products more than any other consumer groups in this study. Still, there is no strong evidence that women actually consider sustainability issues more than men do when buying. The only hint to this is that in Finland only, women have a higher tendency to consider sustainability issues when buying forest-based products. Women are more hesitant than men are to admit to choosing a product that appeals to them without



searching for information beforehand or even options on the shelves, but still do not deny it. Overall, there is no division between men and women. They have the same opinions, just with different strengths. In addition, there are no gender differences in whether consumers would pay more for products of a socially responsible company or even consider the reputation of the company when buying. Thus, it seems women care about sustainability issues more than men do only when they are familiar to them, but are not proactive in trying to increase their knowledge.

To consumers in Hong Kong the ethical reputation of companies is more important when they buy than it is to those in Finland. This difference is especially significant between the men of the two countries. However, when price and quality are factored out consumers in Finland are more likely to choose to buy from a company that has a socially responsible reputation. This difference is especially big between the women of the two countries.

To summarize the result, on an idea level the future consumers seem to think both ecologically and socially related sustainability issues are important today and in the future. This is true for both business in general and for the forest industry. However, this does not fully translate in their buying decisions. The buying of ecological products seems to be more up to chance than to intention. Consumers are not very aware of the availability of options they have nor keen on educating themselves about them. Thus, the information needs to be taken to them more bluntly. In addition, selling ecological products based on their other aspects besides ecologicalness is most likely worthwhile.

The forest industry is considered sustainable in general but room for improvement is seen. Especially the effects of the industry on biodiversity concerns consumers. The products of the industry are seen as sustainable, however and not much attention is put to finding particularly ecological options of these products.

## **5.2 Reliability and validity of the study and future research ideas**

This study is overall reliable. It could be duplicated by anyone at any time by using the same research survey that was used here to collect the data.

However, generally conducting the research with a survey introduces some limitations to the study and may affect reliability. Surveys meant to find out consumers' values are inadequate in predicting buying decisions because of two reasons. First, consumers will most likely answer to them as they see is socially acceptable instead of according to their true behavior. (Auger & Devinney 2007, 377; Devinney 2012, 232) Second, consumers most likely do not have enough knowledge and knowhow to evaluate a certain production method's extent to the environment for example. Thus, surveys will not reveal the whole, objective truth about the behavior of consumers. (Devinney 2012, 232) The results of this research do not therefore describe consumers' buying behavior but the values, ideas and perceptions upon which their buying decisions are built. The reliability of the results is much depended on the level of the respondents' honesty.

Further, the survey was available in Finland only in English, which means the respondents did not get to answer in their native language. Thus, the possibility of misunderstanding the questions exists. There was no complaints from respondents from Finland about not being able to understand the questions, however, which indicates that the language was not a problem. For Hong Kong, the survey was translated to Mandarin Chinese to minimize misunderstandings. Further, some terms were explained in the survey in both countries to ensure the respondents understood the content.

Even after these measures, a few respondents from Hong Kong commented that they were not sure whether to answer based on forest industry overall or the situation in Asia and pointed out that the understanding of what constitutes forest industry may differ between Hong Kong and Finland since there are no forests in Hong Kong. If respondents did not understand the concept of forest industry or understood it differently, the reliability of the study of course suffers. The survey was only pre-tested in Finland, and thus possible misunderstandings due to cultural differences were not

taken into consideration well enough. However, as these comments are very few, the reliability is still considered good. In the future reliability could be improved by further developing and testing the survey. Central concepts and terms used in the survey could be explained more thoroughly. Further, to make sure respondents are thinking of the same context when answering, the survey could be limited to concern the forest industry of specific areas or even some specific well-known forest companies.

On top of being reliable, this study is also valid. Using students as sample is valid in understanding the future because they represent the future consumers. Even further, although they now seemingly represent a single group – students – as they study different fields and are from different backgrounds, they will represent different groups in the future. Thus the results are more generalizable than if the data was collected from students of one field or university only. As the goal of the study is to understand the big picture, using a quantitative method in data collection is also valid. The validity could have been further improved by collecting multiple sets of data at different times. Further, to study the influence of study majors for example, more data should be collected from specific majors.

As mentioned earlier no conclusions can be drawn about the actual buying behavior of individuals based on a survey. Therefore, the results are only valid in analyzing how consumers view different sustainability issues and how they see them affecting their buying decisions. In other words, only general inklings can be made on what types of views and opinions consumers have related to buying but no conclusions can be made as to what they actually buy.

The data is collected from Universities of four Finnish cities, namely Lappeenranta, Turku, Oulu and Helsinki. Therefore, the results cannot be generalized to concern the whole of Finland. Although the demographics of these cities are different and they are not located in the same area, they are still homogenous in that they all are university cities. Thus, they are different from small towns, villages or countryside and people living in them cannot represent the whole population of Finland. On the other hand, as universities in Finland are few, they gather students from all around the country. This improves the generalizability of the results as the pool of students consists of

individuals from different parts of Finland. In the case of this study, however, the respondents that have answered in Finland are not all Finnish. This further supports the fact that the results cannot be generalized to concern Finland.

When it comes to Hong Kong, it is a geographically smaller area and as such a more homogenous environment. In Hong Kong as well, however, the respondents of this study were from various cultural backgrounds. In future, to get more reliable results of the cultural differences between Hong Kong and Finland the survey should be targeted exclusively at these two nationalities and respondents of any other nationalities should be excluded from the data.

What is further limiting the generalizability of the results in both countries is that the amount of answers compared to the sample size is so low. Further, because the channels of data collection are in some cases very general, it is hard to trace where the data has come from. It is impossible to say how many individuals the survey has reach and thus, what the true answer rate is. In the future, this especially could be improved by planning the distribution of the survey better.

What comes to the analysis, it is important to notice that when the data is sorted to groups the amount of data used and thus the generalizability of the results often decreases. This is visible in the frequency Table 2, for example, where the data of question 'I buy ecological product' has been sorted by country of response, gender and lastly gender in each country of response. In the last sorting, the amount of data in each group is quite small. In the group 'Hong Kong Men', for example, there are only 29 answers altogether. There are many cases like this, in which the amount of data used in the analysis drops very low. Therefore, future study is needed to increase the amount of data and thus secure the generalizability of the results in reality.

Although it is common to study ideas and attitudes of today to try to foresee the actions of tomorrow this method has some weaknesses. People's feelings and opinions can develop or alter and they do not necessarily behave in the future, as they would have today. On the other hand, it is unlikely that the core values and ethics of a grown up

alter significantly because they have built across long periods and form a significant part of the individual's persona. (Kumar, 1995, 36)

Another limitation of this study and of all attitude studies is that the individual's attitude or opinion about something does not necessarily reflect on their behavior. Thus, even though the individual may deem an act or behavior unethical, it does not automatically mean they refrain from acting in that manner. Wise versa, merely thinking something is ethical does not automatically make the individual behave in a certain manner. (Ekin & Tezölmez, 1999, 29) In addition, people sometimes even over exaggerate their views and plans or aims to behave in a certain manner when they see it is more acceptable. Thus, what they say about their ethical intentions may not be accurate. (Cohen et al. 1998, 264)

This study has only scraped the surface of consumers' perceptions of sustainability and this perceptions' reflections on their buying decisions. To get a deeper understanding of how consumers feel about sustainability issues, further study is needed. In addition, to understand the actual buying behavior of future consumer, further, observation based study is needed.

## REFERENCES

- Ahmed, M. M., Chung, K. Y. & Eichenhofer, J. W. (2003) Business Students' Perception of Ethics and Moral Judgement: A Cross-Cultural Study. *Journal of Business Ethics*, 43, 89-102.
- Alonso-Almeida, M.D.M., Fernández De Navarrete, F.C. & Rodríguez-Pomeda, J. (2015) Corporate social responsibility perception in business students as future managers: A multifactorial analysis. *Business Ethics: A European Review*, 24,1, 1–17.
- Amberla, T., Wang, L., Juslin, H., Panwar, R., Hansen, E. & Anderson, R. (2011) Corporate responsibility performance in the forest industries. *Social Responsibility Journal*, 7, 3, 472-489.
- Anderson, W. T. & Cunningham, W. H. (1972) The Socially Conscious Consumer. *Journal of Marketing*, 36, 23-31.
- Auger, P. & Devinney, T. M. (2007) Do What Consumers Say Matter? The Misalignment of Preferences with Unconstrained Ethical Intentions. *Journal of Business Ethics*, 76, 4, 361-383.
- Auger, P., Devinney, T. M., Louviere, J. J. & Burke, P. F. (2008) Do social product features have value to consumers? *International Journal of Research in Marketing*, 25, 3, 183-191.
- Bhattacharya, C. B. & Sen, S. (2004) Doing Better at Doing Good: When, Why, and How Consumers Responds to Corporate Social Initiatives. *California Management Review*, 47, 1, 9-24.
- Bigsby, H. & Ozanne, L. K. (2002) The purchase decision: Consumers and environmentally certified wood products. *Forest Products Journal*, 52, 7/8, 100-105.

Bird R., Hall A.D., Momente F. & Reggiani F. (2007) What corporate social responsibility activities are valued by the market? *Journal of Business Ethics*, 76, 189–206.

Bonini, S. & Oppenheim, J. (2008) Cultivating the Green Consumer. *Stanford Social Innovation Review*, 6, 4, 56-61.

Carroll, A. B. (1979) A Three-Dimensional Conceptual Model of Corporate Performance, *Academy of Management Review*, 4, 4, 497-505

Chisnall, P. M. (1995) *Consumer behaviour*. 3<sup>rd</sup> ed. Berkshire, McGRAW-HILL Book Company Europe.

City University of Hong Kong (2016a) Figures at a glance [www document]. [Accessed 13 May 2016] Available <http://www.cityu.edu.hk/fnf/>

City University of Hong Kong (2016b) Student [www document]. [Accessed 13 May]. Available <http://www.cityu.edu.hk/fnf/student.htm>

Cohen J. B. & Chakravarti D. (1990) Consumer Psychology. *Annual Review Psychology*, 41, 243-288.

Cohen, J. R., Pant, L. W. & Sharp, D. J. (1998) The Effect of Gender and Academic Discipline Diversity on the Ethical Evaluations, Ethical Intentions and Ethical Orientation of Potential Public Accounting Recruits. *Accounting Horizons*, 12, 3, 250-270.

D'Souza, C., Taghian, M. & Khosla, R. (2007) Examination of environmental beliefs and its impact on the influence of price, quality and demographic characteristics with respect to ecological purchase intention. *Journal of Targeting, Measurement and Analysis of Marketing*, 15, 2, 69-78.

Davis K. (1960) Can business afford to ignore social responsibilities? *California Management Review*, 2, 3, 70–76.

Deshpande, S. P., Joseph, J. & Maximov, V. V. (2000) Perceptions of Proper Ethical Conduct of Male and Female Russian Managers. *Journal of Business Ethics*, 24, 179-183.

Devinney, T. M., Auger, P. & Eckhardt, G. (2012) Can The Socially Responsible Consumer Be Mainstream? *Zeitschrift fuer Wirtschafts- und Unternehmensethik*, 13, 3, 227-235.

Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R. & Bohlen, G. M. (2003) Can socio-demographics still play a role in profiling ecological consumers? A review of the evidence and an empirical investigation. *Journal of Business Research*, 56, 6, 465-480.

Ekin, M. G. S. (A.) & Tezölmez, S. H. (1999) Business Ethics in Turkey: An Empirical Investigation with Special Emphasis on Gender. *Journal of Business Ethics*, 18, 17-34.

Elkington, J., Knight, P. & Hailes, J. (1991) *The Green Business Guide*. 1<sup>st</sup> ed. London, Victor Gollancz Ltd.

Gleim, M. R., Smith, J. S., Andrews, D., Cronin, J. J. (2013) Against the Ecological: A Multi-method Examination of the Barriers to Ecological Consumption. *Journal of Retailing*, 89, 1, 44-61.

Husgafvel, R., Watkins, G., Linkosalmi, L. & Dahl, O. (2013) Review of sustainability management initiatives within Finnish forest products industry companies – Translating Eu level steering into proactive initiatives. *Resources, Conservation and Recycling*, 76, 1-11.

International Paper (2016) Planet [www document]. [Accessed 27 June 2016]. Available <http://www.internationalpaper.com/planet>

Jansson, J., Marell, A., Nordlund, A. (2010) Ecological consumer behavior: determinants of curtailment and eco-innovation adoption. *Journal of Consumer Marketing*, 27, 4, 358-370.



Kinnear, T. C., Taylor, J. R. & Ahmed, S. A. (1974) Ecologically Concerned Consumers: Who Are They? *Journal of Marketing*, 38, 2, 20-24.

Kumar, K. (1995) Ethical Orientations of Future American Executives: What the Value Profiles of Business School Students Portend. *S.A.M Advanced Management Journal*, 60, 4, 32-47.

Lämsä, A-M., Vehkaperä, M., Puttonen, T. & Pesonen, H-L. (2008) Effect of Business Education on Women and Men Students' Attitudes on Corporate Responsibility in Society. *Journal of Business Ethics*, 82, 45-58.

Lopez, Y. P., Rechner, P. L. & Olson-Buchanan J. B. (2005) Shaping Ethical Perceptions: An Empirical Assessment of the Influence of Business Education, Culture, and Demographic Factors. *Journal of Business Ethics*, 60, 341-358.

LUT (2016a) Tutustu meihin [www document]. [Accessed 2 May 2016]. Available <http://www.lut.fi/tutustu-meihin>

LUT (2016b) Avaintietoja ja Lukuja 2015 [www document]. [Accessed 2 May 2016]. Available <http://www.lut.fi/tutustu-meihin/yliopiston-esittely/avaintietoa>

LUT (2016c) Opiskelu [www document]. [Accessed 2 May 2016]. Available <http://www.lut.fi/opiskelu>

Macinnis, D. J. & Folkes, V. S. (2009) The Disciplinary Status of Consumer Behavior: A Sociology of Science Perspective on Key Controversies. *Journal of consumer research*, 36, 899-914.

Maignan, I. (2001) Consumers' Perceptions of Corporate Social Responsibilities: A Cross-Cultural Comparison. *Journal of Business Ethics*, 30, 57-72.

Mason, E. S. & Mudrack, P. E. (1996) Gender and Ethical Orientation: A Test of Gender and Occupational Socialization Theories. *Journal of Business Ethics*, 15, 6, 599-604.

McManus, L. & Subramaniam, N. (2009) Ethical evaluations and behavioral intentions of early career accountants: the impact of mentors, peers and individual attributes. *Accounting and Finance*, 49, 916-943.

Mohr, L. A., Webb, D. J., Harris, K. E. (2001) Do Consumers Expect Companies to be Socially Responsible? The Impact of Corporate Social Responsibility on Buying Behavior. *The Journal of Consumer Affairs*, 35, 1, 45-72.

Mujtaba, B. G. & Cavico, F. J. (2013) Corporate Social Responsibility and Sustainability Model for Global Firms. *Journal of Leadership, Accountability and Ethics*, 10, 1, 58-75. Nicosia, F. M. & Mayer R. N. (1976) Toward a Sociology of Consumption. *Journal of Consumer Research*, 3, 65-75.

Panwar, R., Hansen, E. & Anderson, R. (2010) Students' perceptions regarding CSR success of the US forest products industry. *Social Responsibility Journal*, 6, 1, 18-32.

Panwar, R., Rinne, T., Hansen, E. & Juslin, H. (2006) Corporate responsibility: Balancing Economic, Environmental, and Social Issues in the Forest Products Industry. *Forest Products Journal*, 56, 2, 4-12.

Panwar, R., Vlosky, R. & Hansen, E. (2012) Gaining Competitive Advantage in the New Normal. *Forest Products Journal*, 62, 6, 420-428.

Porter, M. E. & Kramer M. R. (2011) Creating Shared Value. *Harvard Business Review*, 89, 1/2, 62-77.

Prasad, J. N., Marlow, N. & Hattwick, R. E. (1998) Gender-Based Difference in Perception of a Just Society. *Journal of Business Ethics*, 17, 219-228.

PwC (2016) Global Forest, Paper & Packaging Industry Survey [www document]. [Accessed 27 June 2016]. Available <https://www.pwc.com/ca/en/forest-paper-packaging/publications/pwc-global-forest-paper-and-packaging-industry-survey-2015-edition-survey-of-2014-results-en.pdf>

Ranängen, H. & Zobel, T. (2014) Revisiting the 'how' of corporate social responsibility in extractive industries and forestry. *Journal of Cleaner Production*, 84, 299-312.

Ruegger, D. & King, E. W. (1992) A study of the Effect of Age and Gender upon Student Business Ethics. *Journal of Business Ethics*, 11, 3, 179-186.

Schiffman, L. G. & Kanuk, L. L. (1983) *Consumer behavior*. 2<sup>nd</sup> ed. Englewood Cliffs, Prentice-Hall Inc.

Schmeltz, L. (2011) Consumer-oriented CSR communication: focusing on ability or morality? *Corporate communications: An International Journal*, 17, 29-49.

Sharma, S. & Henriques, I. (2005) Stakeholder influences on sustainability practices in the Canadian forest products industry. *Strategic Management Journal*, 26, 159-180.

Shrum, L. J., McCarty, A. & Lowrey, T. M. (1995) Buyer Characteristics of the Ecological Consumer and Their Implications for Advertising Strategy. *Journal of Advertising*, 14, 2, 71-82.

Stora Enso (2016) Sustainability [www document]. [Accessed 27 June 2016]. Available <http://www.storaenso.com/sustainability>

The Hong Kong Institute of Education (2016a) History [www document]. [Accessed 13 May 2016]. Available [http://www.ied.edu.hk/web/hkied\\_history.html](http://www.ied.edu.hk/web/hkied_history.html)

The Hong Kong Institute of Education (2016b) Breakthroughs and Achievements [www documents]. [Accessed 17 May 2016]. Available [http://www.ied.edu.hk/upload\\_main/manage/publications/info\\_leaflet\\_2014.pdf](http://www.ied.edu.hk/upload_main/manage/publications/info_leaflet_2014.pdf)

The Hong Kong Polytechnic University (2016a) Faculties, Schools & Departments [www document]. [Accessed 17 May 2016]. Available [http://www.polyu.edu.hk/web/en/about\\_polyu/structure\\_and\\_organization/faculties\\_schools\\_departments/index.html](http://www.polyu.edu.hk/web/en/about_polyu/structure_and_organization/faculties_schools_departments/index.html)

The Hong Kong Polytechnic University (2016b) Facts & Figures [www document]. [Accessed 17 May 2016]. Available [http://www.polyu.edu.hk/web/en/about\\_polyu/facts\\_figures\\_development/facts\\_figures/index.html](http://www.polyu.edu.hk/web/en/about_polyu/facts_figures_development/facts_figures/index.html)

The World Commission on Environment and Development (1987) Our Common Future [www document]. [Accessed 11 May 2016] Available <http://www.un-documents.net/our-common-future.pdf>

University of Helsinki (2016) Welcome to the faculty of agriculture and forestry! [www document]. [Accessed 11 May 2016]. Available <http://www.helsinki.fi/af-faculty/>

University of Turku (2016a) Tuoreimmat toimintaa kuvaavat luvut [www document]. [Accessed 2 May 2016]. Available <http://www.utu.fi/fi/yksikot/tse/tietoa/avainlukuja/Sivut/home.aspx>

UPM (2016) Responsibility [[www document]. [Accessed 27 June 2016]. Available <http://www.upm.com/Responsibility/Pages/default.aspx>

van Marrewijk, M. (2003) Concepts and Definitions of CSR and Corporate Sustainability: Between Agency and Communion. *Journal of Business Ethics*, 44, 2/3 95-105.

Vidal, N. & Kozak, R. (2008) Corporate Responsibility Practices in the Forestry Sector. *The Journal of Corporate Citizenship*, 31, 59-75.

Wang, L. & Juslin, H. (2013) Corporate Social Responsibility in the Chinese Forest Industry: Understanding Multiple Stakeholder Perceptions. *Corporate Social Responsibility and Environmental Management*, 20, 3, 129–145.

Webster, JR. F. E. (1975) Determining the Characteristics of the Socially Conscious Consumer. *Journal of Consumer Research*, 2, 3, 188-196.

Wehrmeyer, W. & McNeil (2000) Activists, Pragmatists, Technophiles and Tree-huggers? Gender Differences in Employees' Environmental Attitudes. *Journal of Business Ethics*, 28, 211-222.

Zhen, C. & Aguilar, F (2014) Corporate Social Responsibility in the Wood Products Industry: US and Chinese Consumers' Perceptions. *Forest Products Journal*, 64, 3, 4, 97-106.

Appendix 1: The questionnaire

**Section 1: Background questions**

1. Age:

Below 20	36-40	
21-25	41-45	
26-30	Above 45	
31-35		
2. Nationality:
3. Gender:        F/M
4. Field of study:

Art	Humanities
Mathematics and natural sciences	Law
Social Sciences	Education
Medicine	Engineering
Information Technology	Agriculture and Forestry
Economic and Business	Others: _____
5. Monthly income (net):

0-499	500-999	1000-1499	1500-1999	2000-
-------	---------	-----------	-----------	-------
6. Monthly spending:

0-399	400-799	800-1199	1200-1599	1600-
-------	---------	----------	-----------	-------
7. I am:

A part time student:	A fulltime student:	Not a student:
----------------------	---------------------	----------------
8. Are you working?

No	Yes, part time	Yes, fulltime
----	----------------	---------------
9. Describe briefly your working experience (e.g., how many years, what kind of job, sector etc.) :  
\_\_\_\_\_
10. Do you have children?

Yes	No
-----	----
11. Please asses the importance of the following values as a life-guiding principle for you. (1= against my principles to 7= of supreme importance)
  - a) **Power** (social power, authority, wealth)
  - b) **Achievement** (success, capability, ambition, influence on people and events)
  - c) **Hedonism** (gratification of desires, enjoyment in life, self-indulgence)
  - d) **Stimulation** (daring, a varied and challenging life, an exciting life)
  - e) **Self-Direction** (creativity, freedom, curiosity, independence, choosing one's own goals)
  - f) **Universalism** (broad-mindedness, beauty of nature and arts, social justice, a world at peace, equality, wisdom, unity with nature, environmental protection)
  - g) **Benevolence** (helpfulness, honesty, forgiveness, loyalty, responsibility)
  - h) **Tradition** (respect for tradition, humbleness, accepting one's portion in life, devotion, modesty)
  - i) **Conformity** (obedience, honouring parents and elders, self-discipline, politeness)
  - j) **Security** (national security, family security, social order, cleanliness, reciprocation of favours)
12. Please rate the following statements on a scale from 1 (=strongly disagree) to 5 (=strongly agree):
  1. My first impressions of people usually turn out to be right.
  2. It would be hard for me to break any of my bad habits.
  3. I have not always been honest with myself.
  4. I always know why I like things.
  5. Once I've made up my mind, other people can seldom change my opinion.
  6. It's hard for me to shut off a disturbing thought.
  7. I never regret my decisions.
  8. I rarely appreciate criticism.
  9. I am very confident of my judgments.
  10. I don't always know the reasons why I do the things I do.
  11. I sometimes tell lies if I have to.
  12. I never cover up my mistakes.
  13. I always obey laws, even if I am unlikely to get caught.

14. I have said something bad about a friend behind his or her back.
15. When I hear people talking privately, I avoid listening.
16. I have received too much change from a salesperson without telling him or her.
17. When I was young I sometimes stole things.
18. I have done things that I don't tell other people about.
19. I never take things that don't belong to me.
20. I don't gossip about other people's business.

## Section 2: general consumer behaviour

1. How often do you shop groceries?
  - a. daily
  - b. several times a week
  - c. once a week
  - d. couple times a month
  - e. less often
2. How often do you shop for other things?
  - a. daily
  - b. several times a week
  - c. once a week
  - d. couple times a month
  - e. less often
3. How well do the following statements describe your buying behavior, using a scale from 1 to 7. (1=Strongly disagree, 7=Strongly agree)
  - a. I only buy what I need.
  - b. I prefer ecological products.
  - c. I try to avoid spending money.
  - d. Shopping is a way to pass time for me.
  - e. I am an impulsive shopper.
  - f. I mostly shop online.
  - g. I like buying things for my family and friends
4. Please use a few words to finish the sentence below.
 

I generally avoid buying products that \_\_\_\_\_ .

I usually prefer buying products that \_\_\_\_\_ .
5. Please indicate the degree to which you think the following aspects of a product are important. Rate each of the aspects from 1 to 7. (1= not important at all, 7= very important)
 

Grocery products:

  - a. packaging
  - b. price
  - c. quality
  - d. style
  - e. how ecological the product is
  - f. place of production
  - g. practicality
  - h. some other aspect, please name:

Paper products (copy paper, envelopes, notebooks and calendars, household paper etc.):

  - a. packaging
  - b. price
  - c. quality
  - d. style
  - e. how ecological the product is
  - f. place of production
  - g. practicality
  - h. some other aspect, please name:

## Section 3: Sustainability in general

1. We would like to understand what the term "sustainability" means to you. Please take a moment to brainstorm and list 4 to 6 words that come to mind when you hear or see the terms "sustainable" or "sustainability".
2. Please briefly describe, in a sentence or two, what sustainability means to you.

3. When a company refers to their product as sustainable, what do you think this might mean? For instance, consider that a company has marketed their product as sustainable one, what would you expect to think of such a product? Please mention 3 to 5 aspects that you would consider relevant to your perception of the product.
4. When thinking of how business is related to sustainable development, how critical are the following issues in your opinion currently and ten years from now? Rate each of the issues from 1 to 7. (1= not important at all, 7= very important)
  - a. Environmental protection in general
  - b. Preventing the climate change
  - c. Waste and emission management
  - d. Workers' right and working condition
  - e. Investing on new invention that have positive social impact (e.g., in terms of caring and helping of minorities)
  - f. Charity or voluntary work in helping people in need
  - g. Others, please specify: \_\_\_\_\_

#### Section 4: consumption of ecological products

By ecological product here we mean any product that has been labeled by an eco-label or is stated by the seller or marketer to be a more ecological choice. By normal product we mean any product that has not any eco-labels on them and of which no such claims are made.

I buy ecological products.

if YES → answer to questions 1 and 2 below

if NO → jump straight to question 3

1. Please indicate the degree to which you agree with the following statement when it comes to grocery products. From 1 to 7. (1= I strongly disagree, 7= I strongly agree)
  - a. The quality of ecological products has improved within the last 5 years.
  - b. The price of ecological products has come down within the last 5 years.
  - c. The availability of ecological products has improved within the last 5 years.
  - d. The range of ecological products has improved within the last 5 years.
  - e. The quality of ecological products will improve within the next 10 years.
  - f. The price of ecological products will come down within the next 10 years.
  - g. The availability of ecological products will improve within the next 10 years.
  - h. The range of ecological products will improve within the next 10 years.
2. Please indicate the degree to which you agree with the following statement when it comes to paper products (copy paper, envelopes, notebooks and calendars, household paper etc.). From 1 to 7. (1= I strongly disagree, 7= I strongly agree)
  - a. The quality of ecological products has improved within the last 5 years.
  - b. The price of ecological products has come down within the last 5 years.
  - c. The availability of ecological products has improved within the last 5 years.
  - d. The range of ecological products has improved within the last 5 years.
  - e. The quality of ecological products will improve within the next 10 years.
  - f. The price of ecological products will come down within the next 10 years.
  - g. The availability of ecological products will improve within the next 10 years.
  - h. The range of ecological products will improve within the next 10 years.
3. How well the following statements describe your buying behaviour, using a scale from 1 to 7. (1 = Strongly disagree, 7 = Strongly agree)
  - a. I search the options on shelves to see if there are eco products when I shop.
  - b. I normally just pick up a product that I like without considering the sustainability issues
  - c. I search for information about sustainability (e.g. Co2 footprint, product ethical issue etc.) when I purchase a product.
  - d. I avoid buying products that are harmful to the environment.
  - e. I avoid buying products that are unethical.
4. Please rate the following statements on a scale from 1= strongly disagree to 7 = strongly agree.
  - a) I would pay more to buy products from a socially responsible company
  - b) I consider the ethical reputation of businesses when I shop
  - c) I avoid buying products from companies that have engaged in immoral actions
  - d) I would pay more to buy products from companies that show care for the well-being of our society
  - e) If the price and quality of two products are the same, I would buy from a firm that has a socially responsible reputation



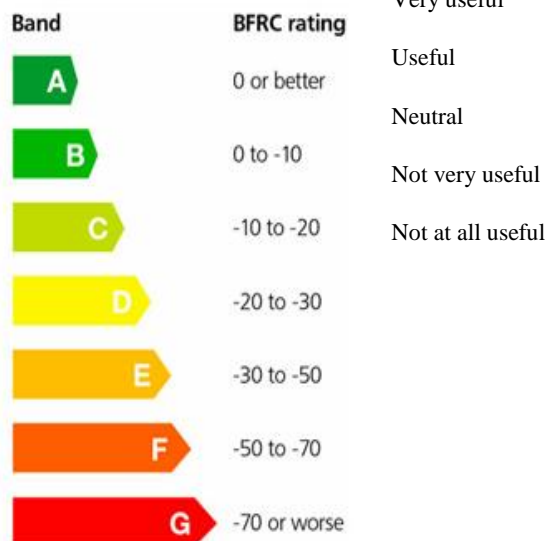
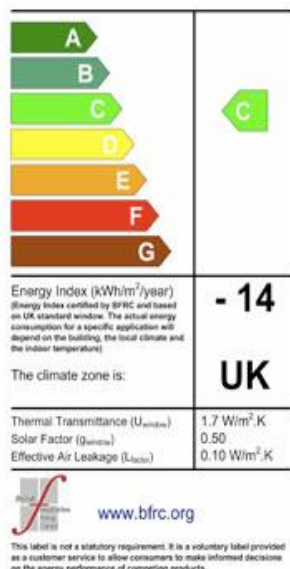
## Section 5: Eco-labels

- If there is an eco-label, how often do you take eco-labels' information into account when purchasing a product?
  - Always
  - Often
  - Sometimes
  - Only occasionally
  - Never
  - I don't know
- How well the following statements describe your buying behaviour, scale them from 1 to 7. (1 = Strongly disagree, 7 = Strongly agree)
  - I pay attention to the eco-labels if they are presented on the products.
  - When I read the additional information on packaging about ecological/sustainable impact, I found that labels are more helpful than words.
  - I don't trust the reliability of eco-labels and sustainability information on products.
- When there is an eco-label that I don't understand, I search for information through (multiple choices are available)
  - the website that provided from the package
  - ask friends or family
  - Internet searching engine (e.g. Google)
  - QR code if it is available
  - I don't know where to search for information
  - I don't search for information
- How useful are the different formulations of eco-labels below to you?
  - Label only



- Very useful
- Useful
- Neutral
- Not very useful
- Not at all useful

- Label with scales and a little verbal explanation



- pure text in label presentation

<b>Environment Facts</b>	
Total product mass: 2573g	
Recycleable content	74%
Post-consumer recycled content	12%
Renewable resource content	17%
Carbon Footprint (thru mfg)	393 kg
Energy used in Manufacturing	457MJ
Energy recoverable	32MJ
Power use - hibernation	0.01 watts
Power use - stand by	0.2 watts
Power use - normal	47 watts
Power use - max	63 watts
Lead (Pb) 0.2g in exempt applications	
Bromine (Br) 23.6g in exempt applications	
Chlorine (Cl) .04g	
Other Halogens 5.4g	
<b>REACH Candidate SVHCs &gt;0.1% by wt</b>	
Dibutyl phthalate	
Bis (2-ethyl(hexyl)phthalate) (DEHP)	
<b>Other ingredients</b>	
Iron, copper, ABS plastic, epoxy, nickel, tin, bioplastic, aluminum, silicon, tantalum, silver, titanium, chromium, boron, ruthenium, palladium, indium, beryllium, calcium	
This product contains less than 0.1% by weight in homogeneous materials of the following: mercury, hexavalent chromium, PBBs, PBDEs; less than 0.09% chlorine; and less than 0.01% cadmium	

Very useful  
Useful  
Neutral  
Not very useful  
Not at all useful

## Section 6: Forestry sustainability

- When you think of forest-based business (e.g. logging and paper pulping), how important are these sustainability issues in your opinion currently? Rate each of the issues from 1 to 7. (1= not important at all, 7= very important)
  - Environmental protection in general
  - Preventing the climate change
  - Waste and emission management
  - Workers' right and working condition
  - Investing on new invention that have positive social impact (e.g., in terms of caring and helping of minorities)
  - Charity or voluntary work in helping people in need
  - Others, please specify: \_\_\_\_\_
- Please asses the following statements on scale from 1 to 7. (1= not important at all, 7= very important)
  - The forest industry is sustainable
  - The sustainability of the forest industry should be improved
  - The forest industry has a big impact in improving the world's sustainability.
  - In the future there will be more diversified use for wood than today
  - I think sustainably managed forest\* is the future of forestry industry.

\*Sustainably managed forest means a forest that is managed carefully and skillfully. When trees are fallen, seeds put to replace them and they will eventually grow to be mature trees. Forest is seen to be a working environment that provides raw materials to forest-based industry in production, such as furniture manufacturing and wood pulp for paper.

- Please answer these questions based on the knowledge, belief, or image that you have of forest industry. (Likert scale 1-7, strongly disagree / strongly agree)
  - Compared to other natural resource based industries (mining, oil and gas), the forest industry has invested a lot to improve its sustainability
  - Compared to other industries, the forest industry's environmental performance is weak
  - Forest industry has a weak reputation for social issues
  - In general, forest industry does not violate labour rights in developing countries
  - The actions of forest industry decrease the quality of life of local people
  - The forest based products are in general sustainable, since wood is renewable material
  - Activities of forest industry has negative impact on forest biodiversity
  - The resource efficiency of the forest industry is low

- i. The energy efficiency of the forest industry is low
  - j. The way forest industry is using water resources is unsustainable
  - k. Forest industry emissions decreases the quality of air
  - l. Forest based products are carbon neutral
  - m. Wood from tropical plantation is more sustainable than wood from boreal forest
4. The following questions concern the future. Please answer these questions on the knowledge that you have (likert scale 1-7, strongly disagree / strongly agree)
- a. In the future there will be shortage of forests
  - b. In the future, wood will be used for making furniture more often than today
  - c. In the future, wood will be used as construction material more often than today
  - d. In the future wood will be used as raw-material for clothing more often than today
  - e. In the future wood will be used as raw-material for medicine more often than today
  - f. In the future wood will be used as raw-material for food more often than today
  - g. In the future, wood will be used as a substitute in many currently oil-based products, such as plastic.
  - h. In the future the recreational use for forests will be greater than today

## Section 7: Consumption on forest-based products

Please indicate the degree to which you agree with the following statements about the specific product category from 1 to 7. (1 = Strongly disagree, 7 = Strongly agree)

Paper products (copy paper, envelopes, notebooks and calendars, household paper etc.):

- a. When buying these types of products I do not usually consider their sustainability.
- b. The ecological product is more expensive than its normal alternative.
- c. The ecological product is of better quality than its normal alternative.
- d. The ecological product is of lesser quality than its normal alternative.
- e. There are not enough ecological choices for this product.
- f. When there is an ecological alternative available I prefer it over the normal product.
- g. The ecological choices for this product are not conveniently available to me.
- h. I do not know where to look for ecological options for this product.
- i. I would be willing to pay more for the ecological than the normal alternative of these types of products.

Wooden furniture such as beds, tables and shelves:

- a. When buying these types of products I do not usually consider their sustainability.
- b. The ecological product is more expensive than its regular alternative.
- c. The ecological product is of better quality than its regular alternative.
- d. Ecological product is of lesser quality than its regular alternative.
- e. There are not enough ecological choices for this product.
- f. When there is an ecological alternative available I prefer it over the normal product.
- g. The ecological choices for this product are not conveniently available to me.
- h. I do not know where to look for ecological options for this product.
- i. I would be willing to pay more for the ecological than the normal alternative of these types of products.