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Green Marketing in Cruise Tourism and Its Association with Customer Choice: The Case of Estonia

Master's thesis

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Abstract

As the environmental concerns of people increases, consumers become more interested in the environmental impact of the products and services they purchase. In this paper, the aim is to identify the perceptions of cruise customers on the environmental impact of cruise ships and the existence of greenwashing in cruising industry in Baltics. Regression analysis results revealed the existence of greenwashing in the cruising industry in Baltic states as the author identified that respondents who got information on cruises' environmental impact through cruise lines' advertisements and tickets have statistically significantly higher possibility to travel with cruise ships again compared to the respondents who do their own personal investigation. It is also identified that environmentally aware cruise passengers regarding the negative impact of cruise ships are less likely to use cruise ships again in the future which is in accordance with the Theory of Planned Behavior.

INTRODUCTION

The development of information and communication technologies lead to an increase in customer awareness regarding environmental issues. Becoming aware of the problems faced by the environment, customers started to pay more attention to their impact on nature which is mostly happening through the products and services they consume. The new trend of eco-friendly purchasing behavior brought new market opportunities for businesses. The practice of business to attract environmentally friendly customers is called green marketing. Each company can implement a variety of tools to attract eco-friendly customers which depend on many different factors including industry, region, product portfolio, and others (Darnall et al., 2012).

As mentioned by Charter (1992), it is almost impossible for a company to develop a product that does not have any negative environmental impact if we consider also the whole supply chain involved in the production process. However, we, as customers, face advertisements of different companies' claims that the company is environmentally friendly. Customers are not able to verify the truthfulness of the environmental claims made by companies. Therefore, this creates incentives for businesses to spread false information regarding the environmental quality of the products and services they supply which is called "greenwashing".

The tourism sector is one of the most profitable industries in the international market which makes all countries' governments attempt to improve their tourism infrastructure and options available for tourists. Cruise tourism is a small but aggressively growing part of the tourism sector which has huge revenue potential. The Baltic Sea is one of the most popular cruise tourism regions in Europe. All three Baltic countries try to improve cruise tourism to generate more revenue and overall positive economic impact (Horta, 2022). As mentioned by Ponton & Asero (2018), greenwashing is widespread also in cruise tourism as the environmental impact of cruise tourism on the environment is strongly negative, but companies use green advertisements.

Companies that claim to be environmentally friendly can increase their profitability and market share by getting government financial support, increased customer attention and demand, and a

better company image (Darnall, 2008; Cohen et al. 2019). This creates incentives for companies to make wrong claims about their environmental impact by sharing incorrect and incomplete information through their sustainability reports and marketing channels. Different cruise lines operating in the Baltic Sea (such as Viking Line, Eckerö Line, Sun Line, and others) claim to have a decreasing negative impact on the environment and shift to clean energy resources. Cruise lines refer to the companies which operates cruise ships (Pallis & Papachristou, 2021).

While cruise lines operating in the Baltic Sea, one of the most popular cruising regions, claim to be environmentally friendly, there is not any existing research identifying if greenwashing practices are used in the Baltic cruise tourism industry and their impact on customer choice. Since the cruise industry is improving in the Baltic Sea region, it is also important to understand if customers are aware of the existing greenwashing practices and if the customer choice is impacted by the environmental claims of cruise lines. There is a research gap in the existing literature on the relationship between the environmental claims of cruising companies and customer choice in Baltic countries. Considering the growth potential and government attention on cruise tourism in Baltic countries, clarification on this relationship will provide necessary information for policymakers to understand which opportunities and obstacles greenwashing creates for the development of cruise tourism in the region. For the business, the analysis results will provide an incentive to make a cost-benefit analysis for greenwashing marketing strategies in the case of negative customer perception identified for greenwashing. The research problem is to understand the relationship between green marketing activities of cruise lines and impact of them on customer choice.

In this thesis, the Theory of Planned Behavior will be used to explain how green marketing practices used by cruise lines can increase the demand for their services and how this demand can decrease in the reveal of greenwashing practices. As explained by Ajzen (1991), the theory suggests that the consumption decision is made based on the perceptions and beliefs of the customers regarding certain brands, products, and services. Greenwashing creates positive perceptions and beliefs which causes an increased demand. However, if customers become aware of greenwashing, then the perceptions will turn negative and there will be no belief in the brand anymore. This will lead to

decreased demand according to the Theory of Planned Behavior. The paper aims to answer the following question:

How are the perceptions of cruise tourists on the environmental impact of the cruise lines operating in the Baltic states and do their consumption decisions depend on the environmental impact and greenwashing practices of cruise lines?

By answering the above-mentioned questions, the author will be able to understand the role of the environmental claims of cruising companies in shaping customer choice.

To be able to answer the research questions, the author will start with an extensive analysis of the existing literature on green marketing, cruise tourism, greenwashing, and cruise tourism and greenwashing in Baltic states. Based on the existing literature, identified research gap, and developed research questions, the author developed hypotheses to be tested. The survey data is collected and analyzed to identify the environmental quality perceptions of customers towards cruise lines and how they will react in the case of greenwashing by cruise operators.

The thesis consists of four major parts. Section 1 describes the existing literature and theoretical framework by providing a summary of the previous literature on the subject matter. Builded research methodology, developed hypotheses, and the description of the survey data graphically with correlation analysis are represented in Section 2. The final section summarizes the results of the regression analysis, describes the empirical findings, and brings out the implications for future research, businesses, and governmental institutions. The thesis ends with concluding notes on the empirical research by referring to the identified research gap and research questions.

1. LITERATURE REVIEW

In this chapter, the author will review the existing literature on green marketing, greenwashing, and the cruise industry. Section 1.1 will provide a general understanding of what green marketing is, why it gained popularity recently, and how it is implemented by companies. The first section will elaborate on Eco Labeling which is a method for green marketing and its potential usage. Understanding what is known about green marketing and eco-labeling in the existing literature will help in understanding if it exists in the cruise industry in Baltics. Section 1.2 provides general information on greenwashing while Section 1.3 focuses on the cruise industry as these two are the main topics in the current research.

In Section 1.4, the author focuses on cruise tourism in Baltic countries as the current research will be based on data from Estonian cruising customers and it is important to understand what is already known about it. Section 1.5 highlights the negative impact of cruising on the environment while Section 1.6 presents the green marketing practices in the cruise industry which will help in understanding if greenwashing applies to the case of the cruising industry.

1.1. Green Marketing

As mentioned by Davis (1993), the growing concern of customers regarding environmental issues has increased the demand for green products all over the world since the late 1900s. The analysis conducted in the case of the UK revealed the fact that consumers tend to purchase more environmentally friendly products because these products make them informed about their impact on nature compared to other products (Darnall et al., 2012). The information regarding the negative impact of humankind and production and consumption processes became more accessible because of improvements in modern technology and the development of better communication tools. This increases the awareness of customers and shapes their interests and expectations towards the products they purchase and consume. Because of the increased customer interest in the

environmental impact of the products and services they consume, companies also started to adopt environmentally friendly processes and present them in communication with their stakeholders.

While being a complex phenomenon to define, green marketing covers the promotion of products that are sustainable and do not harm the environment during production, advertising, sales, and consumption processes (Chaudhary et al., 2011). However, it is not an easy process to remove all negative impacts on the environment for a company in a short period. It is a time and resource-consuming process where advancements in technology are also needed in most cases. Because of the complex nature of becoming an environmentally friendly business, it is very rare to be 100% green for a product or service. Therefore, Charter (1992) suggests that the word "green marketing" can be misleading for stakeholders and the author brings in the concept of "greener marketing".

While changing the whole production process is a costly and long process in almost all industries, companies have different incentives to develop "green" products and services. One of these incentives is a growing trend of Corporate Social Responsibility (CSR) and the market demand for environmentally friendly products which urges companies to act to not lose new market opportunities. Socially responsible companies which also communicate their responsible behavior with their potential customers through green marketing strategies are found to be successful by the empirical data analysis done on survey data by Lerro et al. (2019). The government's pressure to decrease the negative industrial impact on the environment either by punishing "not green" companies or by rewarding "green" companies impacts the competitiveness level and derives the need for becoming "greener". In addition to the subsidies and taxes provided as incentives to the businesses to adjust their production processes, governments also provide financial support to the companies to invest in research and development activities to develop environmentally friendly processes and technologies which is a big motivation in the market to become green (Cohen et al., 2019). According to Darnall (2008), the rewards from being environmentally friendly have been enormous for businesses while the benefits from society are not well absorbed which brings the issue that "green" products are as "green" as they are being marketed.

Baker and Hart (2008) suggest that companies need to add eco-friendly products and services to their portfolios because of the threats from substitute products. While there are big rewards from green marketing, it is also not an easy process. As mentioned by Sujaya et al. (2019), keeping up with technological advancements to not harm the environment is especially difficult for small economies because of the financial difficulties in accessing these technologies. It is technically more difficult and costly to produce and maintain environmentally friendly products while another important step is to persuade potential customers about the features of new products (Baker & Hart, 2008). This difficulty brings the necessity for an effective green advertising strategy which refers to the strategy that companies build and implement to promote their eco-friendly products.

The findings of Davis (1993) present the fact that for a green marketing strategy to be effective, the companies should be able to communicate the specific environmental issue they are touching with their unique product offerings. Green advertising is beneficial for society as it has a positive impact on the level of awareness of the consumers regarding potential negative effects of different products and services. According to Krstic et al. (2021), there are different factors determining the success of green advertising. While some of these factors are related to the content of the advertisements, others are related to the environmental knowledge and expectations of customers. However, it is also not suggested to use unnecessary environmental messages in advertisements, especially for products that do not have an identified impact on the environment. At least, the advertisements should clarify the relationship between the specific product that is advertised and environmental issues. Otherwise, the expected positive impact of the green advertisement will not be realized because of the doubts from the customers on the content of the advertisement which has been verified in the case of Turkey by Yilmaz and Alniacik (2012). Another important issue in the case of green advertisements is not presenting the environmental impact of the product with negative statements. Existing research suggests that instead of focusing on the problems related to the environment and undesired expectations of the future of nature, green advertisements should focus on the specific positive impacts on the environment (Shin et al., 2017).

Another way for companies to become environmentally friendly is to adopt a green demarketing strategy which refers to a marketing strategy where the businesses emphasize the durability of their

products and that consumers can harm the environment less by consuming fewer more durable products (Soule & Reich, 2015). Reich and Soule (2016) explained the difference between green marketing and green demarketing while green marketing is concerned with offering new "green" options to buy to the customer, green demarketing focuses on the decrease in the frequency of purchasing "not green" products. As it is almost impossible for a product or service to become fully environmentally friendly, an increase in the consumption of these products will continue to harm the environment. However, it is more likely to decrease the negative ecological impact by consuming less which is sustainable both from an environmental and economic perspective. By offering high-quality products and services, companies can effectively respond to the social and environmental responsibility concerns of consumers and use green demarketing as a tool in market competition (Sodhi, 2011).

1.2. Greenwashing

The problem with green marketing is the fact that it is not easy to identify for the customer if the environmental claims from businesses are right or wrong because of the nature of these claims (Rotman et al., 2020). To exemplify the situation, when there is a claim regarding the quality of the product from the producer, then after several purchases, the customer will be able to verify this claim and adjust their purchasing behavior while it is not possible in the case of environmental claims. The findings of Aggarwal and Kadyan (2011) suggest that even companies with a strong CSR image are using greenwashing practices. Companies likely provide information regarding their positive impact on the environment to the public but keep the information regarding negative impact without informing the public which is also considered greenwashing (Lyon & Maxwell, 2011). As mentioned by Rotman et al. (2020), when a business decreases its negative impact on the environment in one of its production processes, it does not mean that the company becomes environmentally friendly as a whole because of the complex production process.

If greenwashing practices of the business become known to the public, this causes damage to the corporate image of the company. However, greenwashing has damaged the whole society, not only the companies that are experiencing it. The reliability of the consumers facing false claims regarding

the environmental impact of the business on green products and eco-labels decreases (Furlow, 2009). The author also mentions the fact that the usage of greenwashing by other companies in the same market decreases the incentives of the companies that truly want to decrease the negative environmental impact. Because becoming green is a costly process when implementing changes to their product development processes and investing in CSR policies, the businesses also expect an increase in their market share and better corporate image compared to the competitors. However, because of greenwashing, the companies that do not implement any strategies to decrease their negative environmental impact also get the same attention, demand, and perceived image from the customers. Therefore, no incentives remain for businesses to bear the costs and become environmentally friendly as their competitors can develop a positive corporate image without bearing these costs. In this case, with a lack of strong regulation of greenwashing from governmental authorities to fine "greenwashers", incorrect environmental claims lead to better profitability results. Because of the above-mentioned reasons for keeping costs low, increasing the market share, and improving the corporate image, consumers start to perceive green marketing as an effort to market the products and services instead of having a positive impact on the environment (Lyon & Maxwell, 2011). Because of these reasons, Delmas and Burbano (2011) mention the weak regulatory framework for protecting customer rights as the main trigger for greenwashing. Figure 1 presents the number of companies with greenwashing risk exposure prepared by RepRisk (2022). As shown in Figure 1, the number of greenwashing companies increased sharply in recent years.

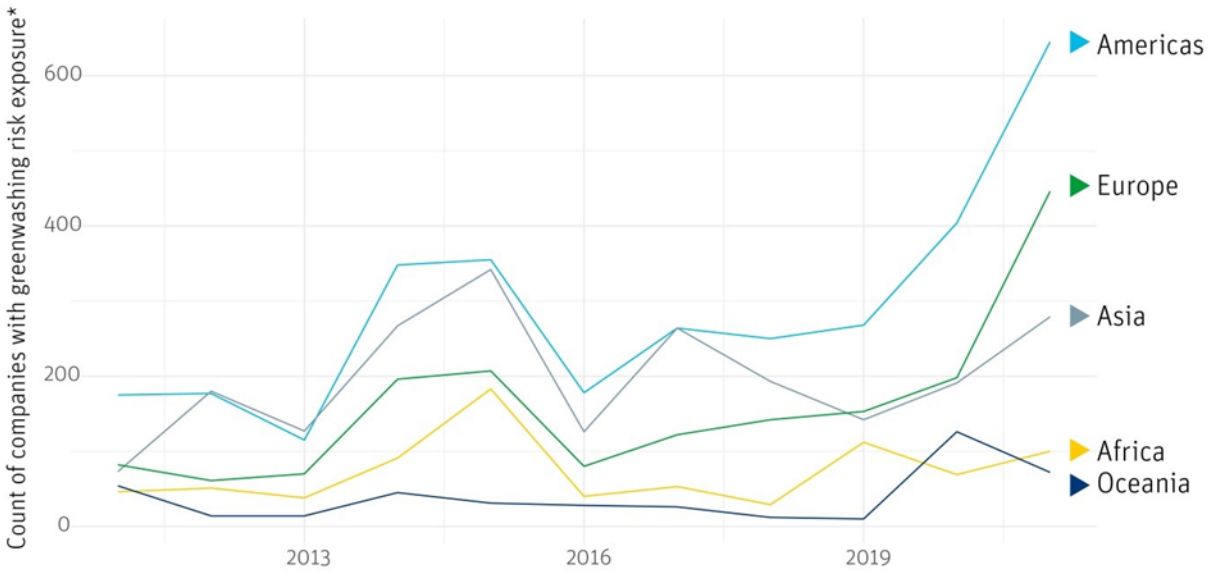

Figure 1: Number of greenwashing companies
Source: RepRisk (2022), author's calculations

Another reason for the spread of greenwashing in the corporate world is explained by Delmas and Burbano (2011). According to the authors, there is no strict and clear regulation on greenwashing which decreases the cost of greenwashing for businesses. Rohmer (2012) divides European countries into four groups based on the existence of legislation that can prevent greenwashing. The first group includes countries that have specific regulations to protect consumers which includes Nordic countries. In these countries, consumers can send their complaints based on which regulatory body assesses the situation and if needed, punish the businesses that damage customer rights. While the second group of countries has legislation to protect both consumers and other businesses in the market, the third group of countries has any specific regulation to protect either consumers or other businesses. Finally, the fourth group of countries, which also includes Baltic countries, has the weakest legislation to protect consumers and there are no specific regulations on how the claims from consumers should be responded to. In the case of the USA, Netto et al. (2020) state that the regulation is not extensive enough to protect consumers from greenwashing.

According to Parguel et al. (2011), another option for the government to prevent greenwashing or at least to make consumers more aware of the products they consume, the rating systems or government-provided labels can be designed. In this case, the incentives for greenwashing would become lower as the government will share appropriate information regarding the environmental impact of the company regardless of the claims made by the company itself. However, there is no one-fits-all approach to preventing greenwashing in all different countries (Zhang et al., 2022). The consumer demand and expectations, the types of products and services marketed, the industries in which greenwashing is common, and the methods in which greenwashing is done are different in each country. Therefore, governments should develop regulations based on the needs of society.

1.3. Cruise Tourism

Cruise tourism is a type of vacation where some part of the travel or the whole travel is spent on the cruise ship. The number of people using ships as a transportation tool decreased because of the creation of new options which are faster and more comfortable. Therefore, the need arose to attract travelers with new features which lead to the emergence and growth of cruise shipping (Brida & Zapata-Aguirre, 2008). While cruise tourism started to gain popularity in the 1970s, it has changed a lot since then and now includes many different features, activities, and destinations (Brida & Zapata-Aguirre, 2008). The popularity of cruise tourism increased because of the different services provided inside the cruises which made the cruise not a transportation tool to visit a destination but a place for entertainment (Veronneau et al, 2015).

Within the last 20 years, cruise tourism has started to generate an important part of international tourism revenue with an ever-increasing number of passengers (Brida & Zapata-Aguirre, 2008). Clancy (2017) mentioned the fact that with the increased demand for cruise shipping, cruise lines were able to generate high levels of profit because of the gaps in the laws and guidelines to regulate the cruise shipping industry. There are 2 main types of cruise tourism service providers. While the first group of companies offers cheaper cruise services to attract more people and gain from economies of scale, the second group provides luxurious services for expensive prices (Mathew, 2021). The analysis done by Jones (2011) shows that while older people are interested in longer cruise trips historically and nowadays, the increasing number of younger people are interested in short cruise trips recently. As the usage of cruise ships becomes accessible for all segments of the population with effectively developed marketing strategies, the need for bigger cruise ships arise. There is also a need to mention the developments in technology to design and develop bigger and better ships to accommodate more passengers and to provide different leisure services on board (Lau et al, 2022). This possibility is also a driver for cruise tourism and promises cruise service providers more profits in the future. Figure 2 shows the significant increase in the number of cruise passengers over the period between 2009 and 2019 and a dramatic decrease in 2020 because of the COVID-19 pandemic.

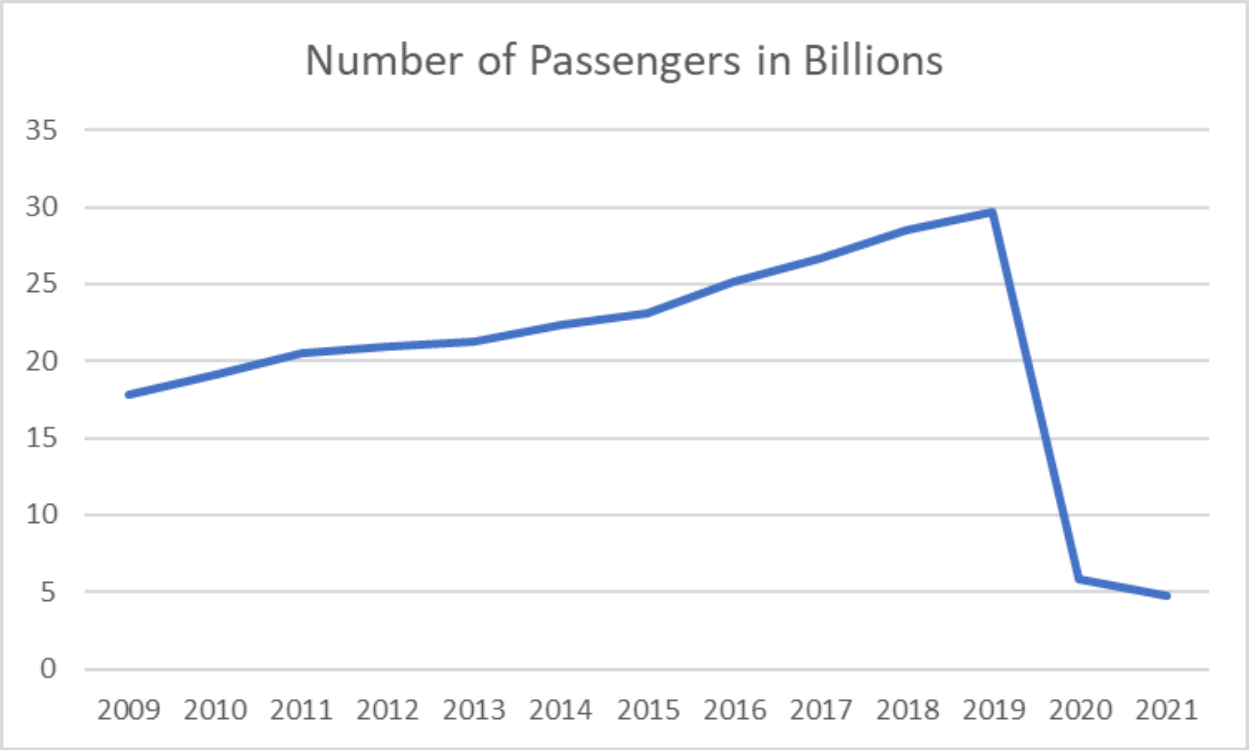

Figure 2: Number of cruise passengers in millions between 2009 and 2021
Source: Statista.com (2022), author's calculations

While cruise tourism faced continuous development since the end of the 20th century, the growth rate is not expected to slow as current development happened in specific regions, including the Caribbean, Mediterranean, Baltic, and others. There are big potentials in other parts of the world where cruise shipping has not been presented well enough yet, like Southern Asia (Clancy, 2017). According to Logunova et al. (2020), the growth of cruise tourism has a positive impact on different sectors of the economy, ports, hotels, and others.

Growth in this industry also brings different challenges with it including increasing customer awareness about environmental issues and resulting CSR expectations (Tamajon & Valiente, 2012). According to the joint study by the World Trade Organization (WTO) and Asia-Pacific Tourism Exchange Center (AZTEC) (2022), new cruise tourism centers are rising in the Asia-Pacific region which requires the development of a cruise tourism strategy and this strategy should be socially responsible.

The spread of Covid-19 brought a big challenge for cruise tourism as all cruise trips were canceled by suppliers or passengers (Mathew, 2021). Although all other segments of the transportation and tourism industry were greatly affected by the pandemic, according to Silva (2021), it is more difficult for cruise tourism to recover to its pre-pandemic levels. The main reason is the fact that other transportation tools allow faster arrival to the destination which decreases the interaction between other passengers. This makes cruise travels more dangerous compared to other transportation tools. If we consider cruises not as a transportation tool, but a type of vacation, then again, it is not as safe as other types of vacations as passengers need to be in close contact with others for a long period without an option to leave immediately if they observe the symptoms of Covid-19. However, Cruise Lines International Association (CLIA) (2021) presents the fact that the demand for cruise tourism has increased after the Covid-19 pandemic but it did not exceed its pre-pandemic levels.

Dwyer and Forsyth (1998) point out that one of the main reasons for different countries to pay attention to the development of cruise tourism is its potential economic impact. Cruise tourism, like any other sector of the tourism industry, can bring foreign exchange resources to the country, contribute to GDP, and decrease the unemployment rate which is especially important in the case of small economies. There are also very high tax rates in cruise tourism which means that growth in this industry will lead to higher tax revenue for the government (Dwyer & Forsyth, 1998). However, the main discussion is on the distribution of the generated profit from different counterparties. There is a need for a comprehensive model to understand how to calculate how the cruise passengers' spending is allocated between the country where the cruise company is based, the leaving point of the cruise, the arrival point of the cruise, and the providers of the services inside the cruise.

According to Felde (2020), one of the main problems related to cruise tourism is the over-tourism complaints that arise which means it attracts an undesirably high number of tourists while benefits do not compensate for the costs. Another important issue about cruise tourism is the serious negative impact of cruise ships on the environment because of emissions into the air, waste waters drained into seas and oceans, and chemical pollution to the water which will be discussed in depth later in the literature review. The next problem with an increased demand for cruise tourism is the fact that while cruise lines are trying to adjust the cruise ships for more passengers, the ports both in the new

tourism destinations in developing countries and the old destinations are not prepared to receive all of the cruise passengers after increased demand (Salgado-Gomez, 2022).

1.4. Cruise Tourism in Baltic Countries

Being on the shore of the Baltic Sea creates great cruise tourism opportunities for Latvia, Lithuania, and Estonia. Considering the size of their economies, the growth of cruise tourism can create big opportunities for economic growth for these 3 countries. Based on the big jump in demand for cruises during the last few years, Cruisebaltic (2022) estimates an increase of 562% in the number of passengers in 2022 compared to 2021. The Baltic Sea is an attractive cruise tourism region because of the existence of many ports and their closeness to them and the existence of capital cities as destinations. The liberation of the southern shores of the Baltic Sea after the collapse of the Soviet Union and the following development in all sectors of the economy, including the tourism sector, increased the interest of travelers to this region.

Steene (2000) mentioned the fact that loyal customers are more careful with the safety of their destinations, and they consider all types of threats when planning their travel. The low level of threats for tourists in Latvia, Lithuania, and Estonia combined with the fact that the prices for accommodation, leisure, and food are cheaper in these countries compared to other European countries cause increased attention from tourists including those who are choosing cruise travels (Druvaskalne & Slara, 2006). Baltic countries, especially Estonia, are a point where easy and cheap access to Scandinavian countries is possible. And using ferries and cruises are the best ways for tourists to move between Tallinn and Scandinavian countries. Sharing a sea border with one of the most attractive regions in the world is an opportunity for Baltic countries, especially Estonia, to further develop tourism including cruise tourism. Because of its unique nature, Baltic countries are also able to provide different vacation opportunities which are attracting socially responsible tourists (Kropinova, 2020). Tourists can spend time in nature, camping, or hiking which are environmentally friendly when done properly.

According to Kowalczyk (2018), cruise tourism has a substantial positive impact on Baltic Sea countries which is not limited to the direct expenditures from passengers. Because of the Covid-19 pandemic, the number of cruise passengers has decreased substantially all over the world, including in the Baltic region. But when considering the numbers before the pandemic, based on the data from Cruisebaltic (2022), while the number of cruise passengers was 22, 307 in 2001 for Riga, this number increased by 310% in 2019. Klaipeda, the main port in Lithuania, received 4,613 cruise passengers in 2000 and increased this number to 68,129 in 2019. The biggest number of cruise passengers has been in Tallinn compared to the other 2 which were chosen as the destination by 656,000 tourists in 2019. Despite the increase in the number of cruise passengers in all European countries, Baltic countries are still falling behind Southern European countries (Artal-Tur et al., 2018). In addition to the positive economic impact of the expenditures of visitors, the growth of cruise tourism also created many new jobs in the region, and its development will continue to contribute to a further decrease in unemployment (Cruisebaltic, 2019).

As mentioned by Urbanyi-Popiolek (2019), the environmental impact of cruise ships is also an issue in the Baltic Sea while different policies have been implemented to reduce the negative impact. The over-tourism issue happening in other parts of Europe related to cruise tourism is not the case for Baltic countries as the analysis on over-tourism done by Felde (2020) revealed the fact that the locals in Baltic countries are not feeling disturbed by visitors arriving by cruises. Horta (2022) mentions that the Baltic sea countries try to improve cruise tourism further in the country and no obligations regarding this have been observed by the population. However, the author also focuses on the need for bigger ships if there is an aim of increasing cruise tourism in the region. Also, the potential of ports should be adjusted so they can accept more tourists. While implementing strategies to expand cruise tourism in the country, all costs and benefits from different stakeholders should be taken into account. Otherwise, the over-tourism problem existing around the Mediterranean sea is also likely to happen around the Baltic sea.

One of the challenges for cruise tourism in the Baltic Sea region is the very cold winters. While during the winter it becomes more difficult for cruise ships to operate because of the weather conditions and ice on the sea, the tourists are also not interested in the Northern European

destinations because of the difficulty of spending time and walking around. According to Charlier and McCalla (2006), cruise lines also do not offer any cruise travel during winter except for some one-night travels.

1.5. Environmental Impact of Cruise Tourism

The potentially big positive economic impact expected from cruise tourism makes it an attractive sector of the economy to invest in especially in small countries (Caric & Mackelworth, 2014). However, it is important to implement strategies for the development of cruise tourism that is sustainable and socially responsible. Otherwise, it has the potential to create problems for the environment and population. While the demand increase will make cruise lines operate bigger cruise ships, this will cause a higher amount of pollution, emission, wastewater, and damage to new destinations. The sustainable development strategies for the cruising industry should include the development of strategies to minimize the direct negative impact on the environment by minimizing non-renewable fuel use and to minimize the indirect negative impact by managing the tourist behavior in new tourism destinations. It is essential to compare all costs and benefits whether direct or indirect when developing a sustainable development strategy because the increased demand leads to a more crowded environment for the local population and a higher level of pollution.

Cruising brings the paradox of environmental impact in itself as well presented by Ponton and Asero (2018). As customer interest in cruise traveling increases, cruise companies search for new destinations to win in the market competition over other companies. However, the provision of new, not well-known destinations to travelers creates danger for the environment of these new destinations. Therefore, for cruise companies to become more competitive and to be able to generate more profit, they need to affect the nature of not-well-known vacation points negatively by attracting more tourists there. As mentioned above in the paper, the nature of cruise shipping makes different types of entertainment and leisure facilities for the passengers which means that tourists are not likely to spend money again on similar facilities in destinations. Also, cruise travel takes more time inside the ship which decreases the time spent on the destination. According to Brida and Zapata-Aguirre (2009), because of these reasons, the positive economic impact of cruise tourism the

economy becomes lower and in contrast, arriving passengers affect the environment and population in destinations negatively. As cruise ships carry more passengers and more products, which, consequently, causes more pollution compared to other types of ships (Lamers et al., 2015).

Lamers et al. (2015) also point out the different types of pollution emitted to the environment because of cruise shipping practices, including waste thrown into the water through cruise ships, emissions to the air and the water by the use of fuel, and problems related to ballast water. Satir (2014) provides extensive descriptive data on the meaning and usage of ballast water. Ballast is a material that is used to manage the weight of the ship to ensure safe sailing because if the weight is not enough, then it will become difficult for the ship to travel; it can be easily moved by wind or wave. While historically different types of materials were used as ballast, water started to be used as ballast commonly. While it is easier to use water as ballast, this easiness brings environmental problems with it. The water pumped inside the ship as a ballast can include many different species and when the ballast water is released in places other than the point where it is pumped, then it can cause major damage to the ecosystem of the release point of ballast water. The problem becomes bigger if the ballast water is polluted and involves microbes. In this case, the release of polluted water in different points where the water is clean, can harm the environment drastically and even affect the health of the population in the surrounding area.

It is very important to consider different types of emissions released to the environment by cruises when directing attention to cruise tourism. As mentioned by Lamers et al. (2015), it is not a correct way to analyze the environmental impact of all ships, including cruise ships, on and around the ports. It is important to understand that cruise ships cause environmental damage to the whole water and air, not only the region they are sailing around. As mentioned by Salgado-Gomez (2022), the increased demand for cruise tourism creates incentives for cruise lines to expand their operations also to developing and underdeveloped regions of the world where environmental regulation is not well-developed. This is likely to foster the negative impact of cruise ships even further which makes it especially important to increase customer awareness and make customers able to assess the environmental quality of the business. The analysis done by Ackerman (2015) shows that passengers who have used cruises before tend to perceive them to be environmentally sustainable. According to

Lusby and Ackermann (2017), gender and age of the passengers affect the perceived level of cruise ships' environmental sustainability.

1.6. Green Marketing in Cruise Tourism

The tendency of consumers to use greener products also creates incentives for suppliers of cruising services to adopt green marketing strategies to be able to attract tourists to their services. Ponton and Asero (2018) provided an analysis of the marketing tools and strategies of cruising industry participants to find and explain the patterns of green marketing. The authors analyze the logos, slogans, symbols, and colors used in the websites of cruising companies to explain the usage of green marketing practices. The analysis results present the fact that as an attempt to create a socially responsible image, cruising companies place notions of nature as a part of their marketing and branding. The reason behind this is obviously to get the attention of customers who are concerned about environmental issues.

Because of the abovementioned negative impacts of cruising on the environment by polluting air, water, and tourist destinations, the term "green cruising" emerged for companies that use green marketing practices to gain their market share. The management of cruising companies understands the fact that awareness of society regarding the negative impact of cruising on the environment is increasing as the industry gets more attention (Howusu & Teyssedou, 2019). As the growth potential of the industry is also high, a higher level of government attention will likely be on cruise tourism in the future.

Green cruising companies are the participants of the cruising industry which are adjusting their tools, processes, and strategies to decrease their negative impact on the environment and to comply with environmental regulations provided by the governments (Han et al., 2019). However, it is not enough to only update the tools and processes if the aim of becoming greener is to attract environmentally concerned customers. The companies should be able to create customer awareness about what is the impact on the environment if they choose green cruise lines or other alternatives available. According to Schwartz (1977), a person needs to understand the need for an action to have the willingness to do it. By using different marketing tools, green cruise lines should effectively

advertise the impact of their business on the environment to explain the need of choosing green companies over other options.

By examining survey data, Han et al. (2017) identified the existence of higher levels of customer loyalty in the cruising industry toward companies that comply with the social responsibility expectations of society. While using green marketing can be an effective strategy to attract customers, it is important to keep these attracted customers after the usage of the green cruise lines' services. Be green or not, any business needs to be able to present high-quality products and services to its customers to increase customer retention rates (Han et al., 2019).

The main cruise lines operating currently have strong claims regarding their commitment to decreasing their negative impact on the environment and developing strategies to manage waste-generated cruises more effectively (Cheeseman, 2022). Based on the analysis done by Pakbeen (2019), the reports provided by the cruise lines clarify the actions taken by them to decrease the negative environmental impact and contribute to a sustainable future. Sharing reports to achieve a lower level of pollution to the environment is a provision of cruise lines' strategy that needs to be applied. However, as also mentioned by Grosbois (2014), it is not possible to access needed information on the results of the implemented strategies. Therefore, the "green image" attempted to be developed by cruise lines cannot be verified which raises doubts regarding greenwashing in the cruising industry. Cruise lines should provide the evaluation of actions taken and measurement of the impact generated according to one of the verified reporting frameworks to remove doubts about greenwashing on them. It clarifies a need for better-developed and demanding regulations towards the cruise industry that can create costs for not presenting appropriate reports.

According to Guaraldo (2021), the members of the cruise tourism industry are highly focused on increasing economic performance while not paying enough attention to the environmental impact of their business. This is mostly because of the costs associated with changing the environmental impact of the company. Cheer (2022) mentions that greenwashing is a common practice in cruise tourism. However, the demand for cruise travel increases which means that either customers do not

have enough information to distinguish between correct and incorrect environmental claims or customers are not concerned about the environmental impact of the cruise lines.

To sum up, in this chapter, the existing literature on green marketing, greenwashing, and the cruise industry has been analyzed and presented. Understanding green marketing and eco-labeling is an important part of this research as it is needed to understand our motivations for cruise lines to involve in greenwashing. By explaining the existing literature on greenwashing, it is explained what forms greenwashing may take and how it can impact customer choice – the key variable of interest in this research. The literature review on the cruise industry in the Baltic states, its environmental impact, and green marketing practices in this industry helps understand the applicability of greenwashing-related research on the cruise industry for the Baltics.

2. RESEARCH METHODOLOGY

2.1. Hypothesis Development

The hypothesis that will be tested for the purposes of this research will be based on the Theory of Planned Behavior. Petrick et al. (2007) analyzed the determinants of purchasing decisions of cruise passengers and found out that there are two groups of customers in the cruise industry. While one group of them is brand loyal and does not take other factors into account, the decisions of the representatives of the second group depend on many different social and economic factors which do not include the environmental impact of cruises. Theory of Planned Behavior can explain the consumption behavior of loyal customers as the theory suggests that customers make their decisions based on their perceptions of certain products and services and if they have positive perceptions toward certain brands, they will purchase from that brand continuously (Ajzen, 1991). Empirical data analysis has suggested that companies offering environmentally friendly products and services became successful in generating profits as customers have positive perceptions toward "green" businesses (Lerro et al, 2019; Darnall et al., 2012). The hypothesis is aimed to test whether the environmental impact of cruises is among the factors that shape customer loyalty. Null hypothesis and alternative hypothesis to answer the research question are as following:

H1: Cruise passengers' consumption decisions are affected by the environmental impact and environmental claims of cruise lines.

H0: There is no impact of cruise lines' environmental impact and environmental claims in the purchasing decisions of cruise passengers.

2.2. Sampling Strategy and Methods of Analysis

To be able to answer the research question, the author will conduct quantitative data analysis. The survey will be conducted to collect the data for quantitative data analysis. The questionnaire will be shared online on Google Forms with the potential respondents.

Survey is an effective method to generate quantitative data which will also be used in this research (Gürbüz, 2017). Greenwashing is not a popularly known phenomenon among the population

excluding those who are really involved in marketing. Therefore, it would not be effective to conduct interviews about greenwashing in the cruise industry with cruise passengers as the answers are likely to be limited. By conducting surveys, it will be easier to reach out to more respondents to represent the cruise industry customers better in the current research. It is a crucial point because there can be many different customer views existing in the market which need to be captured. Also, it will be possible to conduct a regression analysis to understand what determines customer perceptions and decisions for Estonian cruising customers. Additionally, the aim of the paper is to understand the impact of greenwashing on customer choice, and by conducting surveys, it would be easier to get an idea of the choice of the average customer while other methods which are not effective in reaching many respondents are likely to be biased as the data on the impact on customer choice would be limited (Lin, 2018). There are different types of surveys depending on the way that survey has been distributed to and collected from respondents.

The paper will be based on deductive research and it will be confirmatory which means that the author will work on an existing theory and confirm the theory based on the data analysis conducted in the current research (Casula et al., 2021). In this research, the Theory of Planned Behavior is aimed to be confirmed. The Theory of Planned Behavior suggests that the customer's beliefs and perceptions towards certain products and brands lead to the customer's choice. When these beliefs are damaged, then the customer perceptions turn to be negative and customer choice changes to another product or brand (Cameron et al., 2012). Understanding the impact of green claims of cruising companies on customer choice and how the knowledge of greenwashing affects this choice will help the author to confirm the Theory of Planned Behavior.

The current research will be based on a cross-sectional data analysis which means that the responses will be collected from different respondents in the same time period. The time series analysis or longitudinal analysis is not according to the purposes of this research as the author is not interested in the changes in customer choice over time but in the change with the information of greenwashing (Maier, et al., 2023).

The target population for the underlying research is the people that have been on a cruise before. The respondents will be randomly chosen as they will be independent in their decision on participation in the survey and every person will have an equal chance of participation when the survey is ongoing. The target population of the survey is respondents who have used cruise ships before. Considering that cruise trips in the Baltic sea are mainly short trips and Jones' (2011) suggestion that younger people are more interested in short cruise trips, the target population for current research is cruise passengers aged between 18 and 55. Another reason for keeping out of the sample is elderly's low advertisement recalling rate and high advertising persuasion rate in case of recalling which may cause biased results for the research (Phillips & Stanton, 2004). The survey was conducted between April 15 and April 30 2023. For the purposes of this research, cruise travels include all sea travels that have been conducted in cruise ships. So, passengers who are using the cruises for transportation are also included to the target group of this research. The reason behind this is the fact that the negative environmental impact of the cruise ship is the same whether it is used for vacation or transportation. The first question of the survey presented on Appendix 1 is for identifying the target group for the survey.

The survey consists of 8 questions in total. Each question is aimed to answer a specific research question that is mentioned in Introduction. In order to understand if any negative or positive attitudes that will be identified at the end of the survey are impacted by the previous experiences of passengers, Question 2 is added to the survey. Questions 3, 4, 5, and 6 are needed to understand the perceptions of passengers on the environmental impact of cruise tourism. Question 3 will help in understanding whether the environmental impact of cruise ships is an important factor in customers' purchasing decisions. In addition to knowing the importance of environmental impact for customers, it is needed to understand where they get the information on the environmental impact of cruise ships which is on Question 4. If customers base their decisions on the information from the cruise lines, which is provided through sustainability reports, advertisements, any announcements with environmental claims, then, it is more likely that these customers are facing greenwashing.

Questions 5, 6, 7, and 8 are needed to understand the importance of the environmental impact of cruise lines for passengers when making purchasing decisions. Question 5 and 6 help understanding

the level of customer awareness on the environmental impact of cruise ships. By asking question 7, the author will understand how much the customer is concerned about the negative environmental impact of cruise ships. And the final question, Question 8, will clarify whether the purchasing decision of customers will change if they become aware of the negative environmental impact of cruises which they were not aware of before. Figure 3 below is a generalized illustration of the relationship between survey questions and research questions.

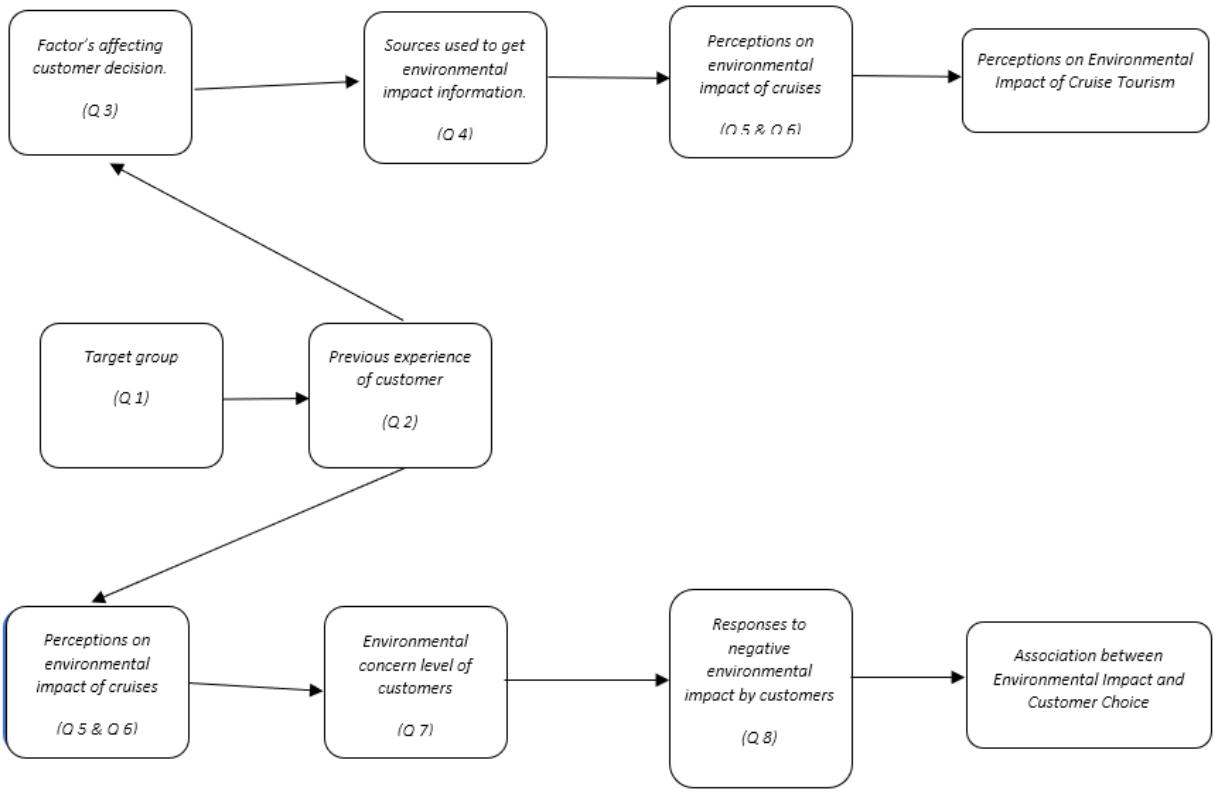

Figure 3: Connection between survey questions and research questions

Source: Created by the Author

The quantitative data analysis consists of 2 main parts. The author provides a descriptive analysis of the survey data and drives insights regarding the respondent demographics, frequency of cruise usage, awareness about green marketing, awareness about greenwashing, and change in their perceptions when greenwashing became known. The author also uses figures and graphs to visualize the survey data. The second part includes the statistical data analysis where the author aims to

interpret customer choice as a dependent variable by the use of green marketing awareness, greenwashing awareness, and the importance of becoming 'greener' for cruise customers as independent variables by conducting a regression analysis. Based on the empirical data analysis results, the author evaluates the hypothesis developed in this section and answers the research question.

2.3. Empirical Model

To understand the determinants of customer choice in the cruise industry, the Ordinary Least Squares (OLS) multiple regression analysis is conducted. The regression analysis is done on R software. To measure the customer preferences, the rate for respondent's intention to use the cruise ships again in the future is used as a dependent variable. The empirical model that is developed for the analysis purposes is below. The aim of the following regression model below is to identify if greenwashing exists in the cruising industry in Estonia and if the awareness of passengers on cruise ships' negative environmental impact affects the customer choice in accordance with the Theory of Planned Behavior.

$$Rate\_PossibleAgain = \beta0 + \beta1 * Rate\_PreviousExp + \beta2 * ImpPrice + \beta3 * ImpTime + \beta4 * ImpCustomerRev + \beta5 * ImpOnboard + \beta6 * ImpEnvironment + \beta7 * Rate\_EnvAwareness + \beta8 * Rate\_EnvConcern + \beta9 * Rate\_CruiseSustainability + \beta10 * Age + \beta11 * Female + \beta12 * Source\_Advertisement + \beta13 * Source\_TicketInfo + \beta14 * Source\_PersonalInv + u$$

The descriptions of the dependent and independent variables used in the empirical model are represented in Table 1.

By using the same survey data, another empirical model will be used to understand how the source of environmental sustainability information affects the respondent's perceived environmental sustainability level of cruise ships. For this purpose, following empirical model was built where *"u"* is the error term:

$$Rate\_CruiseSustainability = \beta0 + \beta1 * Rate\_EnvAwareness + \beta2 * Rate\_EnvConcern + \beta10 * Age + \beta11 * Female + \beta12 * Source\_Advertisement + \beta13 * Source\_TicketInfo + \beta14 * Source\_ThirdParty + u$$

Table 1: Description of Variables

Variable Name	Description
Rate_PossibleAgain	Respondent's possibility to use the cruise ships again in the future based on a 1 to 5 scale
Rate_PreviousExp	Respondent's assessment of their previous experiences on cruise ships based on a 1 to 5 scale
ImpPrice	The impact of price on customer choice in cruise industry based on a 1 to 5 scale
ImpTime	The impact of time suitability on customer choice in cruise industry based on a 1 to 5 scale
ImpCustomerRev	The impact of other customers' reviews and feedback on customer choice in cruise industry based on a 1 to 5 scale
ImpOnboard	The impact of onboard services and facilities on customer choice in cruise industry based on a 1 to 5 scale
ImpEnvironment	The impact of environmental sustainability on customer choice in cruise industry based on a 1 to 5 scale
Rate_EnvAwareness	Respondent's assessment of his\her awareness of cruise ships' environment sustainability level
Rate_EnvConcern	Respondent's assessment of his\her level of concern on environment based on a 1 to 5 scale
Rate_CruiseSustainability	Respondent's assessment of cruise ships' environment sustainability level
Age	The age of the customer
Female	Dummy variable identifying the gender of respondent; gets 1 as a value if the respondent is female and gets 0 as a value otherwise
Source_Advertisement	Dummy variable identifying the source of information on environmental sustainability level of cruise ships; gets 1 as a value if the source is cruise lines' advertisements and gets 0 as a value otherwise
Source_TicketInfo	Dummy variable identifying the source of information on environmental sustainability level of cruise ships; gets 1 as a value if the source is information generated when customer purchases the ticket and gets 0 as a value otherwise
Source_PersonalInv	Dummy variable identifying the source of information on environmental sustainability level of cruise ships; gets 1 as a value if the source is respondent's own investigation and gets 0 as a value otherwise
Source_ThirdParty	Dummy variable identifying the source of information on environmental sustainability level of cruise ships; gets 1 as a value if the source is information generated from third parties and gets 0 as a value otherwise

2.4. DATA DESCRIPTION

2.4.1. Graphical Analysis of Survey data

To understand the environmental impact of cruise ships on the purchasing decision of travelers, the survey data has been collected from 270 respondents. 264 of the respondents are residing in Estonia while the remaining 6 are located in Latvia, Lithuania, Finland, and Sweden. Table 2 and Table 3 summarize the gender and age distribution of respondents. The percentages presented in Table 2 show that respondents are equally distributed by gender. According to Table 3, the main part of the respondents are between 18 and 25. Table 3 also suggests that almost 70% of respondents are under 35.

Table 2. Gender Distribution of Respondents

		Frequency	Percentage
Gender	Male	137	51.7%
	Female	133	49.3%
	Total	270	100%

Source: Author's calculation

Table 3. Age Distribution of Respondents

		Frequency	Percentage
Age	18-25	99	36.7%
	26-35	89	33%
	36-45	60	22.2%
	46-55	22	8.1%

Source: Author's calculation

Figure 4 represents the perceived environmental sustainability level of cruise ships by the respondents. High number of people rated the environmental sustainability level of cruise ships as "fully sustainable" and "high-level sustainable" which means that cruise ships are generally considered as environmentally sustainable transportation tools. However, there are also quite a high number of people rated cruise ships' environmental sustainability lower. It is needed to identify whether the differences of the ratings depend on the source of environmental sustainability information.

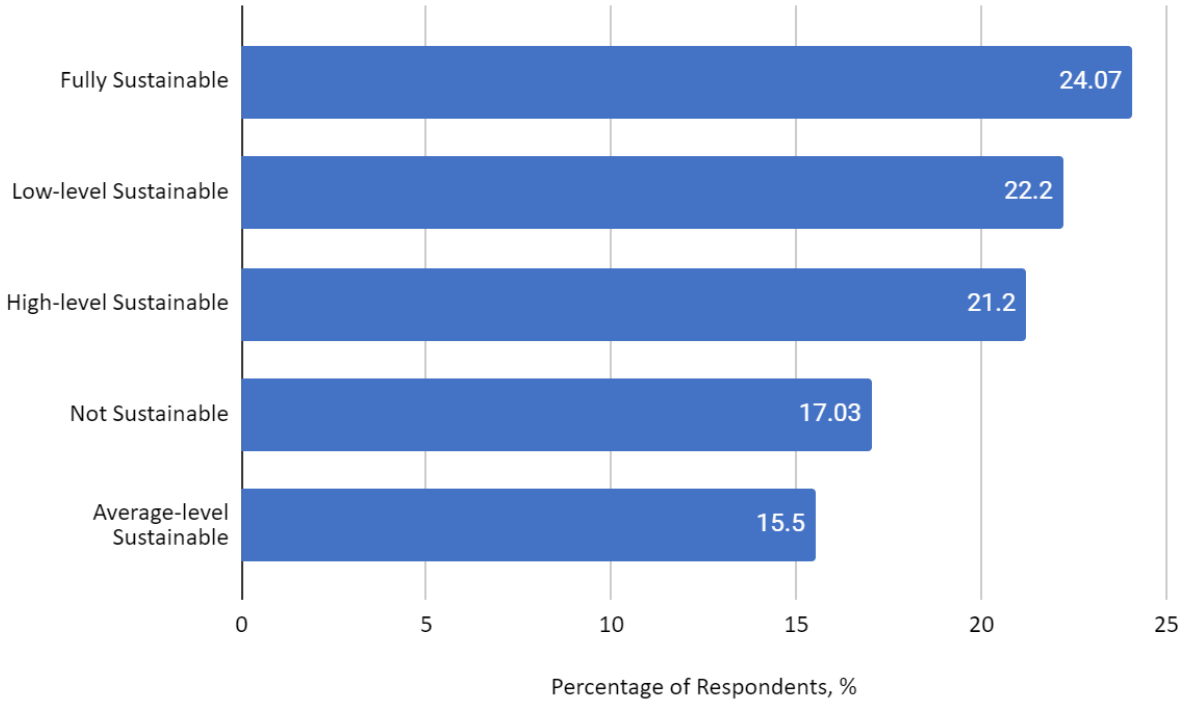

Figure 4. Perceived Environmental Sustainability Level of Cruise Tourism by Respondents
Source: Created by the Author

To understand the impact of the source of the environmental sustainability information for cruise ships on the respondents' perceptions of cruise tourism, the survey also included questions to identify from which source the customer got the information on cruise tourism and its level of environmental sustainability. Following Figure 5 represents a distribution of respondents based on the source of information. According to the figure, 31% of the people got their knowledge on the environmental impact of cruise tourism based on their personal investigation.

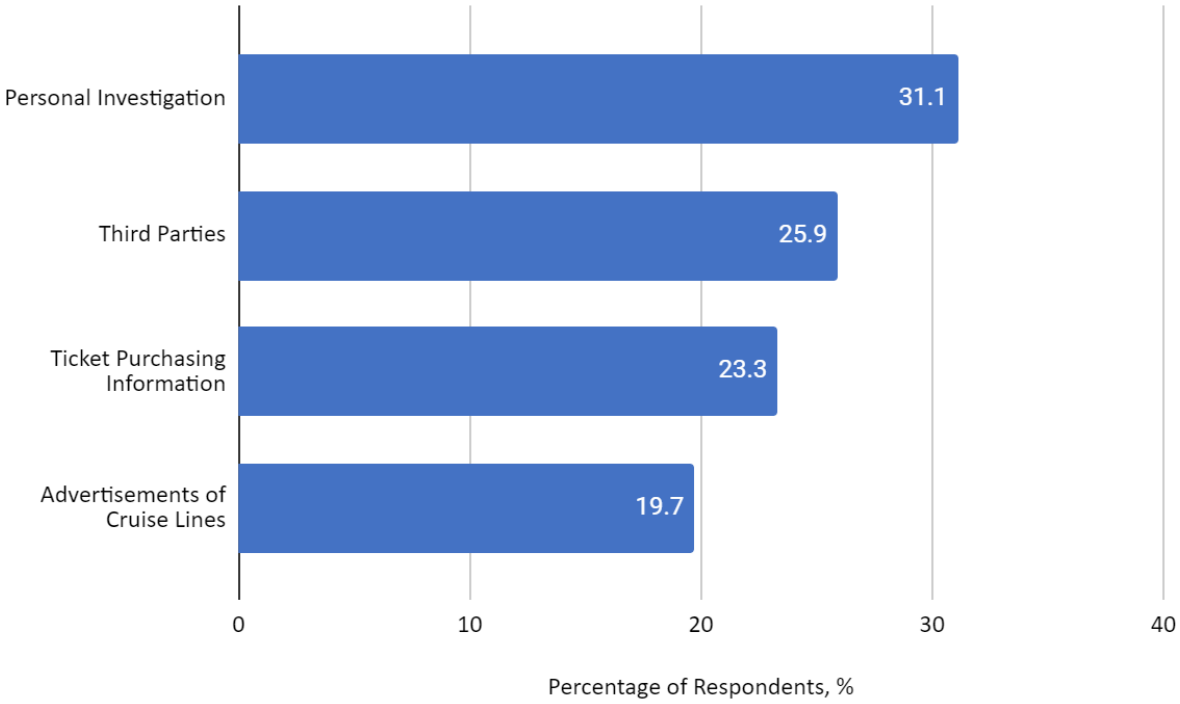

Figure 5. Source of Information on Cruise Ships' Environmental Impact

Source: Created by the Author

Based on the descriptive data analysis, it can be concluded that the sample is gender and age representative according to the chosen target population. Figure 4 suggests that there is no consensus on the cruise ships' environmental sustainability level among survey respondents. According to Figure 5, respondents get information regarding cruise ships's environmental impact via different sources.

2.4.2. Correlation Analysis

Correlation matrix represented in Appendix 2 shows the Spearman correlation coefficients for the relationship between variables included in empirical analysis. According to Schober et al. (2018), Spearman correlation should be used for ordinal data and data generated ranks and scales. Correlation coefficient shows the direction of the relationship between variables. The values of correlation coefficient range between -1 and 1. Higher positive values of correlation coefficient indicate strong positive correlation and lower negative values of it indicate strong negative correlation. When correlation coefficient is 0, then, there is no correlation between variables. The

correlation coefficients in Appendix 2 show that there is not any significantly strong relationship between any of the variables. This indicates that OLS regression models' results will not suffer from multicollinearity problems which will lead to unbiased results. The correlation coefficient for the relationship between Rate_PossibleAgain and Rate_PreviousExp is 0.4 which indicates moderate positive correlation. So, a higher rating on previous experience in cruise ships is associated with the higher possibility to travel in cruise ships again.

The correlation coefficient is 0.4 for the relationship between Rate_PossibleAgain and ImpOnboard which means the higher importance on onboard facilities and services when making purchasing decisions is related with higher possibility to use cruise ships in the future. According to the correlation matrix, higher level of environmental concerns and environmental awareness by the customers are associated with the lower level of possibility to use the cruises in the future again.

Correlation matrix shows that higher level of age is associated with lower level of environmental awareness and environmental concern which means that older people are less concerned and aware about the environment and environmental impact of cruise tourism. This is another reason to keep the people older than 55 years out of the target population. Higher importance on the environmental impact when making a purchasing decision in the cruise industry is associated with a lower level of possibility to use cruises in the future. These findings support the alternative hypothesis developed in section 2.1 - environmentally friendly customers are less likely to use cruise ships again which means the environmental impact of cruise lines has a negative effect on customer choice.

As an addition to the Spearman correlation matrix, VIF (Vector Inflation Factor) test has been conducted on both of the regression models. VIF is a multicollinearity test which measures the correlation between independent variables included in the regression model. Existence of multicollinearity causes biased results of the regression analysis. Considering that VIF value equal to 1 indicates existence of the perfectly independent explanatory variables, for both of the regression models included in this research, VIF values are between 1 and 2. Therefore, there is no multicollinearity problem in current empirical analysis.

One of the assumptions of the OLS model for regression analysis is the presence of homoscedasticity. Breusch-Pagan homoscedasticity test is used to check if homoscedasticity assumption is valid. The null hypothesis for Breusch-Pagan points to the existence of homoscedasticity. Therefore, if the test results for the model do not allow to reject the null hypothesis, then the model's output is valuable for further interpretation. The p-values as a result of the models with Rate_PossibleAgain and Rate_CruiseSustainability as dependent variables are 0.8664 and 0.3597. Therefore, it is not possible to reject the null hypothesis of homoscedasticity and models' results are valid for further analysis.

3. EMPIRICAL ANALYSIS AND DISCUSSION

3.1. Empirical Results

To understand the determinants of the possibility to use the cruise lines' services by travelers, a multiple regression model has been applied to the survey data. The sample size is 270 and adjusted R-squared for the model suggests that the independent variables added to the model are able to explain 42% of the variation in dependent variables. Table 4 shows the summary of the results of multiple regression analysis.

Table 4. Results of Multiple Regression Analysis with a Dependent Variable of Rate_PossibleAgain

Variable Name	Coefficient	Standard Error	t-value
Rate_PreviousExp	0.205***	0.0514	3.992
ImpPrice	0.079*	0.0431	1.842
ImpTime	0.008	0.0416	0.187
ImpCustomerRev	-0.001	0.0414	-0.017
ImpOnboard	0.215***	0.0490	4.388
ImpEnvironment	-0.072	0.0444	-1.618
Rate_EnvAwareness	-0.094**	0.0426	-2.206
Rate_EnvConcern	-0.065	0.0413	-1.576
Rate_CruiseSustainability	-0.025	0.0407	-0.621
Age	-0.001	0.0066	-0.281
Female	0.010	0.1167	0.086
Source_Advertisement	0.526***	0.1801	2.921
Source_TicketInfo	0.498***	0.1687	2.953
Source_PersonalInv	-0.698***	0.1614	-4.323

Source: Author's Calculation

Note: Adjusted R-squared = 0.4258 and degrees of freedom is 254. *** indicates significance at 1% significance level, ** indicates significance at 5% significance level, and * indicates significance at 10% significance level.

The results shown in Table 4 suggest that chosen independent variables are important determinants of intentions for using cruises by the customers who have used them previously. As expected, the perceived quality of the customers' previous experiences have a statistically significant impact on their future choices. Respondents that rated the quality of their previous experiences higher are more likely to use the services of cruise lines again in the future. Age and gender do not have any statistically significant impact on future purchasing decisions of respondents in the cruising industry. The third question in the survey required respondents to determine the importance of different factors for their purchasing decision on different cruise lines' services. The multiple regression analysis shows that higher importance of the price for the customers increases the possibility to use the cruising services again in the future. Considering that there are daily travels of different cruise lines to Nordic countries from Estonia with low prices, it is understandable why price-sensitive customers prefer cruises over other types of transportation, such as planes. The level of importance of time, customer feedback, and environmental impact does not have a statistically significant effect on the future decision of the customer to use the cruise services again. However, the quality of the onboard facilities and services offered are an important determinant for future purchasing decisions. While the level of environmental concern of the respondent and perceived environmental sustainability level of cruise tourism do not affect the possibility to use cruises again in the future, the respondents who consider themselves as more aware of the environmental impact of cruise ships are found to be less likely to use cruise ships in the future.

To identify the signs of greenwashing in the cruise industry, the survey identified the source of information on environmental impact of cruise ships for respondents. The empirical results suggest that the respondents who get the information on the environmental impact of cruise ships from the advertisements of cruise lines and from the information they get when they purchase tickets are statistically significantly more likely to use the cruise ships in the future compared to the ones who get these information from other sources. However, when the environmental sustainability

information is based on the personal investigation of the respondent, the respondent is less likely to choose cruises to travel in the future.

Table 5. Results of Multiple Regression Analysis with a dependent variable of Rate_Cruise Sustainability.

Variable Name	Coefficient	Standard Error	t-value
Rate_EnvAwareness	-0.064	0.0652	-0.974
Rate_EnvConcern	0.079	0.0633	1.256
Age	0.005	0.0101	0.518
Female	0.076	0.1773	0.431
Source_Advertisement	0.042	0.2565	0.165
Source_TicketInfo	0.152	0.2375	0.641
Source_ThirdParty	0.284	0.2441	1.164

Source: Author's Calculation
Note: Multiple R-squared = 0.0176 and degrees of freedom is 261. *** indicates significance at 1% significance level, ** indicates significance at 5% significance level, and * indicates significance at 10% significance level.

Table 5 represents the results of multiple regression analysis for the second model where the dependent variable is the perceived rate of environmental sustainability of cruise tourism by respondents. In the analysis of this model, the aim is to identify the possible association between source of information and perceived environmental sustainability. The R-squared for the model suggests that independent variables are not strong enough in explaining the dependent variable. There are other factors affecting the perceived environmental sustainability level of cruise tourism that are not included in the empirical model and data is not collected in the survey. None of the independent variables have been found to have a statistically significant impact on the dependent variable. However, even though the relationship is statistically insignificant, it is found that respondents who generate information on cruise tourism from the cruise lines' advertisements, tickets, and third parties consider cruises as more environmentally sustainable compared to the

respondents who generate this information based on their personal investigation of cruise tourism. This can be the sign of greenwashing in cruise tourism as information from advertisements, tickets, and third parties can be biased to make potential customers believe that cruise ships do not harm the environment or the environmental damage is minimal.

3.2. Findings and Discussion

The empirical analysis results suggest that previous experiences of the customers on cruise ships, their awareness on the impact of cruise ships on the environment, and the source where the customers get information on cruise ships' environmental impact are the statistically significant determinants of a customer's purchasing decision in the cruise industry. The Theory of Planned Behavior suggests that the customers' purchasing decisions depend on how they perceive certain brands, products, and services (Ajzen, 1991). When the customers realize that these brands, products, and services are not actually how they perceived them, then, the customers change their purchasing decisions toward other products (Ajzen, 1991). The finding that an increased awareness on the environmental impact of cruise tourism decreases the possibility of the future use of cruise ships supports the Theory of Planned Behavior. In consistency with Darnall et al. (2012), the analysis results show that the number of environmentally aware customers increases and they demand "greener" products. The analysis done in this research presents that, compared to other transportation tools, the negative impact of cruise ships on the environment is not well-known by society and therefore, the customers' perceptions are mainly positive about the environmental impact of cruise ships which matches with the findings of Ackerman (2015). As customers become more aware of the actual environmental impact of cruise ships and how their perceptions have not been correct, they decide to not use the cruise ships in the future as suggested by the Theory of Planned Behavior.

Another important finding of empirical analysis is the statistically significant impact of source of information on the purchasing decision of customers. The results show that when customers generate information on cruise ships and their environmental impact from cruise lines' advertisements or tickets, then they are more likely to use cruises again. It is a sign of greenwashing in the cruising industry. This means that cruise lines make claims about being environmentally

friendly which are manipulating customers on the environmental sustainability level of cruise ships. However, when the customers make their own investigation to find out the level of environmental sustainability of cruise ships, they get different information which affects their future purchasing decision negatively. As also suggested by Bahja et al. (2018), negative environmental impacts of cruise ships are not clear for the cruise passengers and only when passengers make their own investigation, then the negative impact is identified.

Another result of regression analysis is the fact that price-sensitive customers have a higher possibility to travel with cruise ships again in the future. This result is in accordance with the findings of Druvaskalne and Slara (2006) who have mentioned that lower prices and affordability is one of the reasons for the growth of cruise tourism in the Baltic Sea. An explanation of this finding can be the fact that, in this research, a distinction between passengers who use cruise ships for transportation and who use cruise ships for leisure and traveling is not done.

The survey results suggest that environmental sensitivity of the cruise passengers is not a barrier for them to use cruise ships in the future. The higher level of consideration on the environmental impact of cruise ships while making purchasing decisions (Imp_Environment) does not decrease the possibility of using cruise ships again in the future. Self-assessed environmental concern level (Rate_EnvConcern) also does not have a statistically significant impact on customer choice. Considering the discussion of Felde (2020) on the non-existence of over-tourism in Baltic countries, the fact that cruise tourism is still in its growth phase can be an explanation behind these results. As cruise tourism in Baltic countries is not as extensive as it is in South Europe and other cruising regions, environmentally sensitive people do not feel the negative impact of the cruises on the environment yet. As mentioned by Horta (2022), if the growth continues and governments do not regulate the growth effectively, then, the negative environmental impact will increase and decrease the environmentally sensitive population's desire to travel with cruises.

Regarding the customer perceptions on cruise sustainability, the analysis done in this paper shows that gender and age of the respondent do not have any statistically significant impact on perceived cruise sustainability level which is opposite to the findings of Lusby and Ackermann (2017).

Overall, the empirical analysis suggests that the null hypothesis (H0) developed in this paper can be rejected which, in turn, means that the environmental claims of companies affect the customer choice in the cruising industry. The environment related claims made in advertisements make customers purchase the cruise tickets again which supports the alternative hypothesis (H1). This finding is new in cruise tourism and green marketing related literature which clarifies the existence of greenwashing in the cruising industry. It also validates the suggestions of Theory of Planned Behavior by showing that when cruise passengers become aware of the negative environmental impact, their purchasing decisions are affected negatively.

The second part of the empirical analysis suggests that source of information, age, gender, environmental awareness and concern are not the statistically significant determinants of the perceived environmental sustainability level of cruise ships. Instead, there are other determinants of perceived environmental sustainability of cruise tourism which needs to be determined. The existing literature on customer perceptions need to be analyzed to identify other possible determinants of customer perceptions in cruise tourism which then needs to be tested empirically in the future.

Despite its contributions on determining the greenwashing and identifying the determinants of customer choice in the cruise industry in Baltic countries, there are some limitations of the current research. One of the limitations of the chosen methodology is the fact that the customers' claims on how greenwashing practices will affect their choices will not reflect their actual decisions when they need to make a consumption decision. Many factors may affect their decision in the moment of consumption such as price, comfort, and other benefits which are not incorporated in this research. Therefore, these other factors should be included to the empirical analysis for more reliable results in the future research. Another limitation is the area that the survey will be conducted. While the research is about the cruising industry in Baltic states including Latvia, Lithuania, and Estonia, the survey will be conducted only in Estonia because of the time constraint and suitability in accessing respondents. Furthermore, the results of the empirical analysis are generalized for all cruise line companies. The research does not distinguish between companies based on the level of greenwashing. However, there is a need to consider the company-level differences in future research.

Conclusion

Cruise tourism is growing at high speed as a part of international tourism (Brida & Zapata-Aguirre, 2008). The same trend exists for the Baltic Sea region. There is an absence of research on greenwashing in the Baltic cruise industry while the industry is growing at high speed in the region. Considering the negative impact of cruise tourism on the environment, this research has a goal to

identify if the customers are aware of the environmental sustainability level of cruise tourism, what determines the perceived environmental sustainability level of cruise tourism, and what are the determinants of the purchasing decision of tourists. Considering the lack of literature of the determinants of customer choice in greenwashing, this research aims to determine if age, gender, source of information, self-assessed environmental concern, and self-assessed awareness level on cruise ships' environmental impact have any impact on perceived cruise sustainability.

The analysis results answer research questions by bringing out the empirical evidence on the existence of greenwashing in cruise tourism. Another important implication of the research is the fact that the environmental awareness of the respondents decreases the possibility to purchase the cruise tickets again which is supporting the Theory of Planned Behavior. The second part of the research questions whether customer choice is affected by the environmental impact of cruise lines. The findings show that environmental concerns of the cruise passengers affect their purchasing decisions if they are aware of the negative environmental impact of the cruise ships.

Regarding the perceptions of the cruise passengers on the environmental sustainability level of the cruise ships, the analysis reveals that none of the gender, age, environmental awareness, and source of cruise related information variables are the determinants of cruise sustainability level for Baltic countries. Future research should identify the other possible determinants of customer perceptions on cruise sustainability for Baltic cruise passengers.

The support for the Theory of Planned Behavior suggests that the companies in the cruise industry need to decrease their negative environmental impact because of the possible negative impact on the customer base and profitability in the future as customers become more environmentally aware. The cruising companies need to align the customer perceptions and reality to become more transparent. To do so, there is a need to emphasize on continuous attempts on decreasing the pollution level in the advertisements. The existence of greenwashing in the cruise industry suggests that this transparency is not there right now. While the greenwashing strategies have worked previously, increased data availability and customer sensitivity can risk the reputation and finances of

greenwasher businesses as potential customers can reach different kinds of information when doing their own research compared to what presented by the companies.

The empirical analysis results suggest that participants of the cruising industry are able to manipulate the customers by their advertisements where they are likely to present incorrect, biased, or limited information. Considering the ongoing and potential growth of cruise tourism, the governments of Baltic countries also need to review the customer protection laws and regulations to eliminate the manipulative behavior and greenwashing in the cruising industry. The perspectives on marketing by cruise lines should be changed. Instead of using greenwashing practices, the companies should implement actual CSR strategies to decrease the negative impact on environment and share the real results with the customers. Otherwise, the reveal of the greenwashing practices will harm the brand image of the cruise line companies negatively which will affect financial results also. If cruise line companies and governments do not improve their strategies on environmental impact and sharing information with customers, then the predictions of Horta (2022) on over-tourism and increased negative environmental impact will happen in the near future.

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APPENDIX 1 - Survey Questions

Link to the survey on Google Forms:
https://docs.google.com/forms/d/e/1FAIpQLSe2BCFWEsC2jnhgP6MHNOcaLpVD4cnRNWe1Txd0TdxK7fyOgw/viewform?usp=sharing

Question	Answer Options	Frequency	Percentage
Have you ever been on a cruise before?	Yes	270	67.2%
	No	132	32.8%
If your answer is 'Yes' to the previous question, how would you rate your latest experience on a cruise on a scale from 1 to 5? (1 – very bad, 5 – very good)	1	15	5.6%
	2	49	18.2%
	3	62	22.9%
	4	70	25.9%
	5	74	27.4%
How would you rate each factor below in affecting your decision when you decide on the cruise line to use on a scale from 1 to 5? (1 - very little impact, 5 – very big impact): Price	1	54	20%
	2	66	24.4%
	3	57	21.1%
	4	55	20.4%
	5	38	14.1%
How would you rate each factor below in affecting your decision when you decide on the cruise line to use on a scale from 1 to 5? (1 - very little impact, 5 – very big impact): Time Suitability	1	57	21.1%
	2	59	21.9%
	3	57	21.1%
	4	48	17.8%
	5	49	18.1%

How would you rate each factor below in affecting your decision when you decide on the cruise line to use on a scale from 1 to 5? (1 - very little impact, 5 – very big impact): Customer Reviews and Feedback	1	59	21.9%
	2	44	16.3%
	3	49	18.1%
	4	72	26.7%
	5	46	17.0%
How would you rate each factor below in affecting your decision when you decide on the cruise line to use on a scale from 1 to 5? (1 - very little impact, 5 – very big impact): Onboard Facilities and Other Services	1	38	14.1%
	2	58	21.5%
	3	77	28.5%
	4	59	21.8%
	5	38	14.1%
How would you rate each factor below in affecting your decision when you decide on the cruise line to use on a scale from 1 to 5? (1 - very little impact, 5 – very big impact): Environmental Impact and/or Claims on Environmental Impact	1	57	21.1%
	2	65	24.1%
	3	65	24.1%
	4	47	17.4%
	5	36	13.3%
How would you rate your awareness of the environmental impact of cruise tourism on a scale from 1 to 5? (1 – fully unaware, 5 – fully aware)	1	48	17.7%
	2	68	25.3%
	3	55	20.4%
	4	50	18.5%
	5	49	18.1%
Please, answer if you rate your awareness of the environmental impact of cruise tourism as 3 or higher in Question 4. How did you get information about the environmental impact of cruise lines?	A)Advertisements of cruise lines	53	19.6%

	B)Information when you purchase a ticket	70	25.9%
	C)Third-party websites, media channels, and social media accounts	63	23.3%
	D)Your personal investigation	84	31.1%
How would you rate the environmental sustainability level of cruise tourism on a scale from 1 to 5?	1	46	17.1%
	2	60	22.2%
	3	42	15.5%
	4	57	21.1%
	5	65	24.1%
How would you rate your level of concern on the environmental impact of cruise tourism on a scale from 1 to 5?	1	56	20.7%
	2	70	25.9%
	3	49	18.1%
	4	43	15.9%
	5	52	19.4%
How would you rate your possibility of using cruise ships again next time, considering their environmental impact based on a scale from 1 to 5 (1 - not possible at all, 5 - definitely possible)?	1	31	11.5%
	2	52	19.3%
	3	71	26.3%
	4	74	27.4%
	5	42	15.5%
What is your gender?	A)Male	137	51.7%
	B)Female	133	49.3%
	C)Other	0	0%
Please, specify your country of residence.	Sweden	2	0.74%
	Finland	2	0.76%
	Estonia	262	97.2%

	Latvia	1	0.37%
	Lithuania	1	0.37%
	Germany	1	0.37%
	Netherlands	1	0.37%
Please, specify your age.	<=20	20	7.4
	21-25	79	29.3
	26-30	51	18.9
	31-35	38	14.1
	36-40	36	13.3
	41-45	24	8.9
	46-50	15	5.5
	51-55	7	2.6

APPENDIX 2 - Results of Tests

2.1. Correlation Matrix

	Rate_PossibleAgain	Rate_EnvAwareness	Rate_EnvConcern	Rate_CruiseSustainability	Rate_PreviousExp	Age	ImpPrice	ImpOnboard	ImpCustomerReview	ImpTimeSuitability	ImpEnvironment
Rate_PossibleAgain	1	-0.2	-0.1	0.01	0.4	-0.02	0.1	0.4	0.05	0.001	-0.1
Rate_EnvAwareness	-0.2	1	0.003	-0.06	-0.1	-0.03	-0.03	-0.1	-0.03	-0.06	0.04
Rate_EnvConcern	-0.1	-0.003	1	0.05	-0.08	-0.01	-0.03	0.007	0.002	-0.04	-0.03
Rate_CruiseSustainability	0.01	-0.06	0.05	1	0.1	0.04	-0.09	0.06	0.09	0.02	0.01
Rate_PreviousExp	0.4	-0.1	-0.08	0.1	1	0.02	0.02	0.3	0.06	-0.05	-0.004
Age	-0.02	-0.03	-0.01	0.04	0.02	1	-0.05	-0.05	0.07	-0.05	-0.05
ImpPrice	0.1	-0.03	-0.03	-0.09	0.02	-0.05	1	0.05	-0.007	0.03	0.04
ImpOnboard	0.4	-0.1	0.007	0.06	0.29	-0.05	0.05	1	0.04	-0.004	-0.03
ImpCustomerReview	0.05	-0.03	0.002	0.09	0.06	0.07	-0.007	0.04	1	0.08	-0.09
ImpTimeSuitability	0.001	-0.06	-0.04	0.02	-0.05	-0.05	0.03	-0.004	0.08	1	-0.06
ImpEnvironment	-0.1	0.04	-0.03	0.01	-0.04	-0.05	0.04	-0.03	-0.09	-0.06	1

2.2. Breusch-Pagan Heteroskedasticity Test

		BP	df	p-value
Dependent Variable	Rate_PossibleAgain	9.2072	15	0.8664
	Rate_Cruise Sustainability	8.7975	8	0.3597

2.3. VIF Test

2.3.1.VIF Test Results for Model 1 (Rate_PossibleAgain)

Variable Name	**VIF**
Rate_PreviousExp	1.22
ImpPrice	1.02
ImpTime	1.04
ImpCustomerRev	1.05
ImpOnboard	1.15
ImpEnvironment	1.06
Rate_EnvAwareness	1.04
Rate_EnvConcern	1.05
Rate_CruiseSustainability	1.05
Age	1.05
Female	1.04
Source_Advertisement	1.58
Source_TicketInfo	1.68
Source_PersonalInv	1.72

2.3.2. VIF Test Results for Model 2 (Rate_CruiseSustainability)

Variable Name	**VIF**
Rate_EnvAwareness	1.03
Rate_EnvConcern	1.03
Age	1.03

Female	1.01
Source_Advertisement	1.34
Source_TicketInfo	1.40
Source_ThirdParty	1.37

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