`Greenwashing`
Deceptive Business Claims of Ecological-Friendly Marketing Strategies of Different Airlines in the Star Alliance Group

Bachelor Thesis for Obtaining the Degree

Bachelor of Business Administration in

Tourism, Hotel Management and Operations

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Vienna, 31 January 2017

Affidavit

I hereby affirm that this Bachelor's Thesis represents my own written work and that I have used no sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are properly cited and attributed.

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Abstract

In recent years, there has been a growing importance in ecological-friendly marketing strategies within the airline industry. Environmental safe advertisement is an idiom which comprises many factors identified as positive initiatives or greenwashing. The thesis, investigates the airlines of Star Alliance and addresses their contribution to environmental friendly marketing strategies or deceptive claims of green initiatives. Therefore, the data of 28 member airlines and the Star Alliance Group were analyzed as well as illustrated in graphs and tables to better understand each associates position in the Star Alliance Group. The research was based on theoretical data collection of deductive content analysis. Therefore, three research questions were developed and acknowledged to better understand the issue targeted in this paper. This thesis is directed to the objective customers of the aviation industry especially of Star Alliance and its member airlines. In order to support the overall understanding of the air transportation industry, environmental concerns of today's society were discussed. Additionally, airlines within the Star Alliance Group were identified to demonstrate their attitude towards environmental sustainability, through the use of CSER certificates and slogans as well as green advertisement initiatives. The main results of this paper are that six signals of greenwashing of Star Alliance member airlines have been inspected. Furthermore, the differences of big, middle sized and small airlines contribution to a safe earth or to deceptive claims of environmental friendly strategies have been identified. The principle outcome of this thesis is that big airlines compared to middle sized and small airlines contribute most to greenwashing through their big marketing campaigns and the pressure of society. Moreover, all airlines contribute to greenwashing, no matter how big their advertisement initiatives are, they still pollute the air through the use of kerosene. In conclusion, although all associate airlines contribute to environmental sustainability, they contribute as well to greenwashing through deceptive environmental friendly marketing claims.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

IATA

'[International Air Transport Association works with its airline members and the air transport industry as a whole to promote safe, reliable, secure and economical air travel for the benefit of the world's consumers.]'(IATA, 2017)

ISO 14001

'[ISO 14001 specifies the requirements of an environmental management system (EMS) for small to large organizations. An EMS is a systemic approach to handling environmental issues within an organization. The ISO 14001 standard is based on the Plan-Check-Do-Review-Improve cycle.]'(Rouse, 2017)

ISO 50001

'[Using energy efficiently helps organizations save money as well as helping to conserve resources and tackle climate change. ISO 50001 supports organizations in all sectors to use energy more efficiently, through the development of an energy management system (EnMS).]'(ISO, 2017)

EMAS

'[The EU Eco-Management and Audit Scheme (EMAS) is a premium management instrument developed by the European Commission for companies and other organizations to evaluate, report, and improve their environmental performance.]' (EMAS, 2017)

IEnVA

'[The IATA Environmental Assessment (IEnvA) Program is an environmental management and evaluation system designed to independently assess and improve the environmental performance of an airline.]'(IEnvA, 2017)

1 Introduction

1.1. Background Information

In the last few years, there has been a growing interest in ecological-friendly marketing strategies within the airline industry. There is a difficulty to distinguish between real green marketing and misleading environmental strategies, which depend on the interpretation of individuals and eco-entrepreneurs (Heikki et al., 2001). These perceptions are shaped by culture, leadership strategies and financial goals of individual opinions and corporate values (Nyilasy, Gangadharbatla and Paladino, 2013). The issue is that some people already consider greenwashing at a point where others perceive green marketing.

Awareness of green marketing started in the mid 1980s when AMA (American Marketing Association) immersed a workshop about the topic ecological marketing. This meeting raised the engagement of environmental activities. Therefore, the first two books about the subject green marketing were published in 1992 by Ken Peattie, United Kingdom and in 1993 by Jacquelyn Ottman, United States of America (Polonsky, 2016). In the following years, eco-entrepreneurs as well as individuals started In 1960s. Greenwashing roots proceeded, with the misleading assurances of the energy companies. These companies were investigated by different stakeholders being against inaccurate environmental approaches (Marciniak, 2009). However, only around 30 years later the United Nations Framework Convention on Climate Change (UNFCCC) came into force in 1994 after the Earth Summit in Rio de Janeiro, in 1992 (Ramakrishna, 2016). One of their goals is to stabilize green house gas emissions in the atmosphere. The UNFCCC currently consists of 194(+EU) member states all over the world with the primary goal to contribute to a more environmentally desirable earth. Therefore, several agreements, such as the Kyoto Protocol (2005), two degrees Celsius goal, Bali Road Map (2007), Cancun Agreements (2010), Paris Agreement (2015), COP 22 in Marrakech (2016) came into force to set general applicable standards (Ramakrishna, 2016). However, UNFCCC has been accused to be involved in greenwashing. Based on the underlying argument that the main sponsors of this conference were companies who contribute most to environmental pollution. It is assumed that they support the

organization for two reasons: i) buy a clean image and, ii) to gain influence in the COP (Conference of the Parties). Furthermore, the accusations comes from the fact that member states do not get penalties if they do not fulfill the negotiated targets. Therefore, as Røkkum (2016) state, these are rather guidelines than applicable laws to actively contribute to a more desirable earth.

An important industry affected by the previous discussion is the airline industry. Less than 20 years ago, Star Alliance established its business on May 14th, 1997 as the first global operator including five airlines, Air Canada, Lufthansa, Scandinavian Airlines, THAI and United. Nowadays, the member airlines are: Adria Airways, Aegean Airlines, Air Canada, Air China, Air India, Air New Zealand, ANA, Asiana Airlines, Austrian, Avianca, Avianca Brasil, Brussels Airlines, Copa Airlines, Croatia Airlines, EGYPTAIR, Ethiopian Airlines, EVA Air, LOT Polish Airlines, Lufthansa, Scandinavian Airlines, Shenzhen Airlines, Singapore Airlines, South African Airways, SWISS, TAP Portugal, Turkish Airlines, THAI and United. Star Alliance employs 430,000 people, transports 640 million passengers yearly, 4,600 aircrafts in total operating 18,500 flights on a day to 1,330 airports in 192 countries (Star Alliance, 2016). These numbers are increasing further; therefore Star Alliance realized the rising need for contributing to a better environment.

In 1996, the Lufthansa Group, a member airline of Star Alliance, established policies concerning the environment; these long-term targets should be reached by 2020 (Lufthansa Group, 2014). The goals include the subsequent subjects, fuel efficiency, climate protection, active noise protection, as well as energy and resource management. Moreover, Star Alliance determined ecological protection standards, required for every airline before they can become a member of the Group. However, research is still limited understanding how the Star Airlines members respond to these standards, and whether they actively respond or tend to greenwash instead.

1.2. Thesis Objectives

Based on the preceding discussion, the purpose of this dissertation is to investigate green marketing strategies of members of Star Alliance Group. Furthermore, this study aims to identify whether the members are contributing to a better

environment or rather involve in greenwashing activities. In doing so, the study is able to compare the members of the Star Alliance Group, and thus provide an overview of which airlines contributes to an environmental desirable earth or neglects environmental sustainability. Thus, the following research questions will be addressed in this thesis are:

How does the Star Alliance Group and its member airlines contribute to a better environment?

What kind of CSER strategies do Star Alliance members employ?

Do Star Alliance members employ any deceptive claims leading to greenwashing activities?

1.3. Design of thesis

The introduction part of the thesis explains the background information as well as topic and significance, to provide a good framework to better understand the mentioned arguments. Furthermore, it states the purpose of this paper, the objectives, and the research question. In the following paragraphs the paper examines how the issues were approached and consequently the results of the secondary research are presented. Additionally, this chapter negotiates on the types of secondary data which are included and sampling process in the study. Furthermore, this dissertation examines the structure of different steps done, the techniques used and ultimately how the results were generated. First of all, relevant literature was found in regards to the research question. Types of secondary data included in the study were the literatures that were reviewed. Secondly, data from the Star Alliance Airline Websites were converted into a table. This table provides information on the basic profile features of all the member airlines in the Star Alliance Group which were compared to each other. Furthermore, the CSER and eco-friendly programs were highlighted and discussed in the result analysis of this dissertation. The last part of this dissertation includes an analytical summary. Furthermore, the conclusion of the thesis provides recommendations for the future, limitations, arguments of other researchers and states the final statement.

2 Literature Review

2.1 Corporate Social and Environmental Relationship

'[We define Corporate Social Responsibility (CSR) as a company´s verifiable commitment to operating in an economically, socially and environmentally sustainable manner that is transparent and increasingly satisfying to its stakeholders. Stakeholders include investors, customers, employees, business partners, local communities, the environment and society. The emphasis is on transparent and verifiable stakeholder driven sustainable business operation.]' (Katsoulakos et al., 2004) Enterprises usually have incorporated several CSR practices, although most companies have no coherent CSR strategy (Karim, Chase and Rangan, 2012). According to McWilliams, Siegel and Wright a CSR strategy '[is the motivation for the action that identifies socially, as opposed to privately, responsible action]'. If firms decide to integrate social actions, at the cost of profits, than they act socially responsible. On the other side, if a corporation is only willing to serve at the lowest level possible, it acts privately responsible. For instance, if airlines offer, for its employees, a day care center, they may only provide this, to reduce absenteeism of their workers. This will increase their profits in the long run but does not contribute to a real CSR strategy. Private motivations, have as well the potential to benefit the society but only if they are of relevance to managers (McWilliams, Siegel and Wright, 2005).

CSR-*Corporate Social Responsibility and* CE-*Corporate Environmentalism is the basis for CSER* (Reynolds, 2013). *According to* Lynes and Andrachuk '[CSER -*Corporate Social and Environmental Relationship*, refers to the commitment of firms to contribute to both social and environmental goals, including: regulatory compliance, voluntary initiatives, accountability, communication and transparency as well as institutionalization of environmental and social issues.]' (Lynes and Andrachuk, 2008, p. 378, chapter 2) Star Alliance identified the need for CSER-principles because of the subsequent indicators. First of all, consumers demand, not only airlines, to perform all operations environmentally safe (Wood, 2015). Second, employees prefer working for companies who contribute positively to a more desirable earth (Pleumarom, 2007). Moreover, staff members tend to enlarge their performances

when they actively contribute to environmental practices (Smith and Font, 2014). Third, CSER fosters interrelationships and therefore guides to develop new markets and upgrades operations. Additionally, modernization, joined afford and higher profits are all benefits of protecting the environment. Furthermore, we can state that acting ecological friendly is a moral imperative for everyone, everywhere (Cafferty, 2011).

2.2 Green Marketing and Green Washing

Various terms are used to promote green marketing (for instance.: ecological-, environmental-, sustainable- marketing). (Katrandjiev, 2016) The brothers Ramesh Kumar and Rakesh Kumar defined '[*green marketing* as the marketing of products that are presumed to be environmentally safe. Thus, green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising]'. (Kumar and Kumar, 2013, p. 147) '[The term *greenwashing* can be defined as a marketing instrument used mainly by large corporations in order to give impressions of ecological issues concern.]' (Marciniak, 2009, p.53, Chapter 3)

'[*Being green is more than just buying 'eco'. It is an unshakable commitment to a sustainable lifestyle.*]' – (J. Nini,2016)

In 2009, Marciniak demonstrates a 30:3 ratio. This ratio represents that out of 30 people who claim to be concerned about the environment, only three of them take action and translate this concerns into real behaviors (Marciniak, 2009). For some people ecological issues are just a trend, like a fashion, which remains only for a short period but is not of relevance to make real changes. This behavior is known, in developing countries, where people cannot afford to take care of the environment. The ratio also depends on the country. For example, inhabitants of China behave in an eco-friendly way and are more conscious than the Americans. Furthermore, it depends on the media where people get their information from (Rahbar and Abdul Wahid, 2011). Mass media and social media is not a reliable source for environmental petitions (Castelo Branco and Lima Rodrigues, 2006). They are often steering specific feelings or messages. Therefore, society should consider real

environmental articles developed by researchers and scientist and academically approved information tools.

The effects of green marketing is that the rising demand of the society towards environmental sustainability puts a lot of pressure to enterprises. Consumers are changing and will continue changing their patterns of consumption (United Nations Environment Program and World Tourism Organization, 2012).

Therefore companies are trying to adapt and often advertise more than they contribute to a better environment. This can risk a good reputation, for goals that only benefit in the short run. Another drawback is that many companies only highlight one product which is environmentally friendly, but neglect the negative environmental contributions of all their other products and services. Then it is difficult, for consumers, to identify an organization who is doing greenwashing or green marketing (Brunton, 2015). Therefore, six signs where identified that contribute to greenwashing which will be discussed later in the literature review.

2.3 Star Alliance Drivers of Ecologically Friendly Marketing Strategies

The drivers for airlines to undertake green actions is of more relevance than decades ago (Delmas and Burbano, 2011). Therefore, the eco-friendly motivators, of the aviation industry, primarily focus on the following four sectors: science, markets, social system and the political system. These sectors and relationships create motivations for airlines, which were analyzed by Lynes and Andrachuk in 2008.

Furthermore, the article identified that these four sectors, experience external drivers as well as internal motivations to actively develop environmental policies. The first motivation includes financial benefits which can be obtained by eco-entrepreneurship when they win a market share of the stakeholders who demand ecological safe approaches. The second driver is the competitive advantage, achieved by improving the products and services in order to decrease the consumption of scarce resources and to reduce environmental pollution.

One of the competitive advantages for instance of the Lufthansa Group is the Strategic Program, 7 to 1 Our Way Forward. The aim of this program is to increase products efficiency, attractiveness and ecologically attributes. In order to achieve

these goals, 500 Million Euros will be invested into this program until 2020 (Bartels, 2016). The third impulse is the image enhancement which can be acquired by creating an environmentally protected brand label. An illustration for this is Star Alliance, the Group launched a brand campaign labeled: Alliance's "Biosphere Connections" which is a partnership established by the three subsequent institutions.: UNESCO, IUCN and Ramsar Wetland (Alastair, 2016). The fourth motive is the increasing pressure of stakeholders, which incorporates the satisfaction of consumers green needs and expectations. The fifth incentive is the desire to delay or avoid regulatory actions in the form of penalties and negative advertising of misleading behaviors. All the arguments mentioned influence the commitment to ecological friendly marketing strategies of a company (Lynes and Andrachuk, 2008).

2.4 Star Alliance Contribution to Promote Environmental Concerns

Star Alliance identified the increasing need for environmental sustainability, of the society. Therefore, they started to introduce several code of conducts towards ecological issues. The benefits, of these new standards, for the society, is that they are now aware of ecological issues. 30 Years ago, no one was informed and stimulated to do environmental marketing for the society to educate for the required need for contribution (Marciniak, 2009).

Due to the pressure of the society, Star Alliance developed the following standards, for future member airlines. These five standards contribute to protect the environment and need to be fulfilled before entering into the Star Alliance Group. The first standard includes the introduction of management systems that support the awareness and protection of the environment. Second, all the operations need to be in accordance to laws and regulations concerning the environment. They are applicable in the standard performance of every employee who needs to conduct business in a responsible way. Third, every stakeholder (customer, governments, local communities, unions, employees, suppliers) is involved to support and take responsibility for ecological concerns. In order to discourage contamination, member airlines need to decrease rubbish, reuse products, and only buy goods that can be reused or obtain recycled components. Fourth, enhance environmental friendly technology, this contribute to standards that are positive for the environmental when buying aircrafts, equipment and facilities. Fifth, promoting

permanent improvement to attach to the prominent need for development in the environmental perspective (Communication department, 2016).

For Star Alliance, sustainability already starts before the actual travel. Therefore, many airlines have switched from paper tickets, to online tickets, using digital baggage services, mobile boarding passes and offering ejournals. Due to this change, the Group can save money by acting environmentally friendly. Moreover, the Lufthansa Group focuses on decreasing environmental pollution on the ground as well as in the air. On the ground they will modernize the fleet, increase the use of electro mobility alternatives, focus on sustainable construction and modernizations, manage energy and resources wisely and recycle aircraft components. In the air the Lufthansa Company will use alternative fuels, support climate research, reduce weight in the aircraft, participate in air space management and active noise protection (Bartels, 2016).

When passengers decide to choose one of the following Airlines, Lufthansa, Swiss, Austrian Airlines and the Lufthansa subsidiary AirPlus, they have the opportunity to contribute to climate protection projects by voluntary CO2 compensation (Bartels, 2016). Another benefit, for passengers, due to green marketing is that, in the last years, airlines have increased the offer of alternative, environmentally friendly transportation opportunities, than cars, to and from the airports to their final destination of their trips. These alternatives include car sharing, ICE high-speed rail connections, long-distance and postal busses. The Lufthansa Group grouped roads, rail and air feeder services together in 2015 for better mobility (Bartels, 2016).

Furthermore, the Lufthansa Group does not only pay attention to their own customers, it also takes into account the direct environment. Therefore, four pillars for protecting the climate were developed. The first pillar is technological process; the second is improved infrastructure, the third refers to operational measures and the fourth are economic measures (Bartels, 2016). Another airline, United, introduced four pillars which slightly differ from the Lufthansa Group. These pillars include, fuel efficiency and carbon management, sustainable travel products and services, alternative fuels and partners in sustainability (United Airlines, 2016).

2.5 Green Washing Marketing Strategies of Star Alliance

The difference between green washing and ecological marketing strategies is a thin line (Nyilasy, Gangadharbatla and Paladino, 2013). This can be identified by the following six signs of misleading environmentally friendly marketing strategies. The first sign involves the hidden trade-off, here marketers try to highlight a particular area which is environmentally safe but disclose other attributes (e.g. serving organic products and fair trade, but still using plastic dishes). Second, fibbing, which means that an enterprise focuses attention to own a logo which seems to be ecological recognized, but does not really need to be environmentally friendly. Third, irrelevance, some companies claim parts of their products to be free from environmental pollution, although this has been forbidden by law, already years ago (e.g. using newer aircraft although some old aircrafts have already been forbidden). Fourth, no proof, companies which have no real eco-friendly certificates but claim to behave in an environmentally friendly way (e.g. airlines claiming to have a positive attitude towards the environment, but no real seal). (Mayer, Ryley and Gillingwater, 2012) Fifth, vagueness, slogans including green marketing arguments, without crucial information given, for instance, "earth friendly". Sixth, lesser of two evils, behavior of promoting products that are not good for the environment with an eco-friendly aspect, such as, “friendly fuel” or “organic plastic” (Marketing Inc, 2007).

3 Method

3.1 The purpose of the research

The airline industry experiences a growing need of green marketing strategies, in recent years. Therefore, the purpose of this research is to identify if Star Alliance member airlines act environmentally friendly or contribute to greenwashing strategies.

This paper outlines three main research problems, which were analyzed in the result part of this thesis and answered in the conclusion. For these illustrations, secondary data was investigated. To answer the hypotheses, variables were developed and the main points were discussed. The differences as well as the relationships between them were interpreted.

3.2 Data Collection

3.2.1 Sample

The sample of this paper are all the members of the Star Airlines, in total 28 member airlines:

- Air Canada
- Lufthansa
- Scandinavian Airlines
- THAI
- United
- Adria Airways
- Aegean Airlines
- Air China
- Air India
- Air New Zealand
- ANA
- Asiana Airlines
- Austrian
- Avianca
- Avianca Brasil
- Brussels Airlines
- Copa Airlines
- Croatia Airlines
- EGYPTAIR
- Ethiopian Airlines

- EVA Air
- LOT Polish Airlines
- Shenzhen Airlines
- Singapore Airlines
- South African Airways
- SWISS
- TAP Portugal
- Turkish Airlines

All the information in the result part were collected from websites of Star Alliance member airlines. Some had more accurate data and others did not provide the same data. However, all the information were up-to-date on every website. The empirical part of this thesis was done to find out the similarities and differences between the members websites as well as between the websites and the theoretical part of this thesis.

3.2.2 Quantitative (deductive) content analysis

'[Quantitative analysis refers to economic, business or financial analysis that aims to understand or predict behavior or events through the use of mathematical measurements and calculations, statistical modeling and research.]' (Abella, 2017) Qualitative data was collected through analyzing Star Alliance member airline websites. Therefore, tables were developed to provide an illustration of the most important figures of each of its member airlines which can be found in the appendix. In the next section, these results were converted into charts, to better analyze Star Alliance associates. In order to highlight the effect of greenwashing the following variables were analyzed, summarized and compared to each other.

3.2.3 Coding

In order to proceed with the quantitative content analysis the following variables were used to guide the website analysis.

- Year of Entry to Star Alliance
- Airports Served
- Daily Departures
- Number of Aircrafts
- Passengers Annually
- Countries Served
- Revenue Passenger KM
- Sales Revenue

- Employees
- Focus Destination
- Continents Served
- Travel Classes
- Loyalty Program
- CSER Certificates
- Airline Slogans
- Aircraft Types
- Green Initiatives

Furthermore, in the result section, the similarities and differences between the websites and the theory were analyzed. First, the results of each section will be explained. Then based on the results, the differences and similarities will be discussed. The last part of this paper is the conclusion, which consists of an analytical summary, answers the research questions, provides the limitations and recommendations as well as the final statement of the main arguments.

4 Results

4.1 Analyze the Different Airlines within the Star Alliance Group

Figure 1, illustrates that Star Alliance established its business on May 14th, 1997 as the first global operator including five airlines, Air Canada, Lufthansa, Scandinavian Airlines, THAI and United. In the following years, Star Alliance amount of participants increased steadily until today. The last airline who became a member status was Avianca Brazil in 2015.

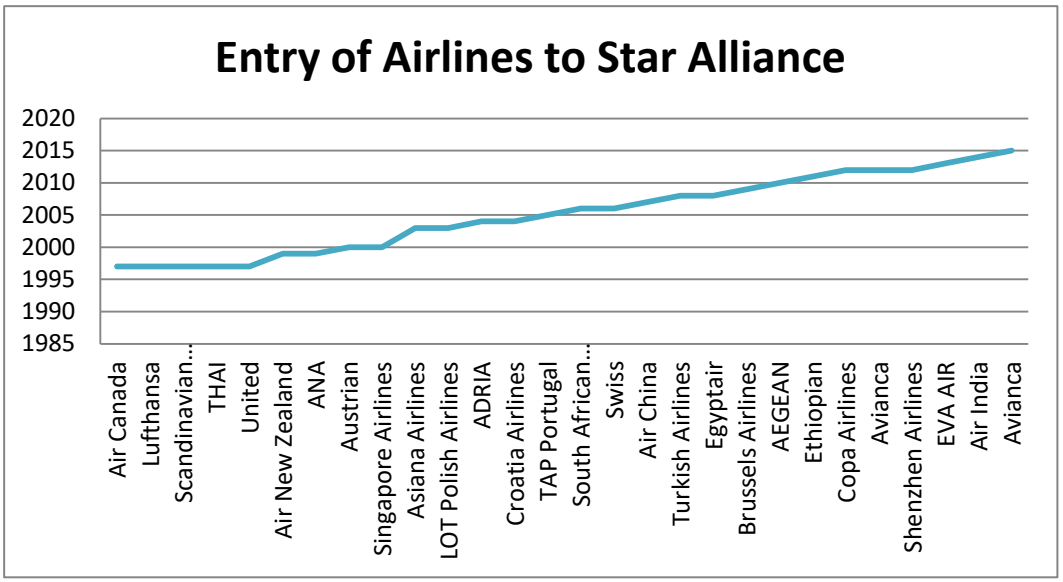

Figure 1 Entry of Airlines

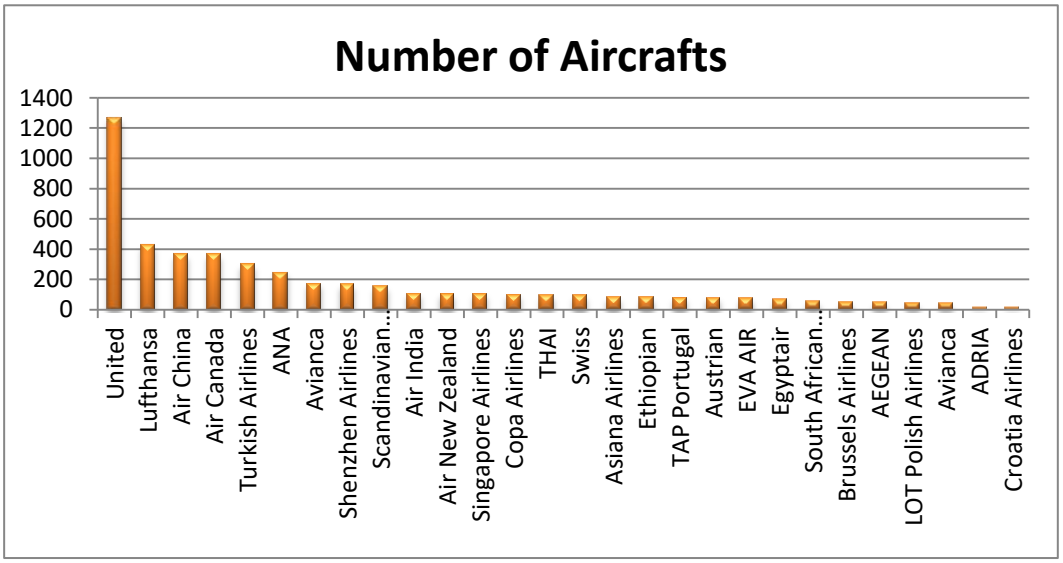

Figure 2 Number of Aircrafts

Figure 2, is a bar chart which addresses the number of aircrafts per member airline of the Star Alliance Group. The size of the carriers can be compared from this diagram. United Airlines consists of 1,265 aircrafts and can easily be identified as the associate airline with the highest capacity. The second air shuttle with the largest amount of aircrafts is Lufthansa, however with less than half of the number of United Airlines, 424. The once with the smallest number of aircrafts are ADRIA and Croatia Airlines with 12 aircrafts each.

Figure 3 Number of Employees

Figure 3, is a pie chart which presents the number of employees of every member airline. United Airlines, which we already identified as the one with most aircrafts, is as well the one with the highest number of people employed, 87,500. Proceeded by Lufthansa with 55,000 employees. The company with the smallest amount of people working for them is ADRIA which has only 388 employees. As already mentioned, ADRIA is also one of the airlines with the smallest number of aircrafts. Compared to Croatia Airlines, which has the smallest number of aircrafts, shares place with ADRIA. However, Croatia Airlines employs more than double the amount of people, 902 compared to ADRIA.

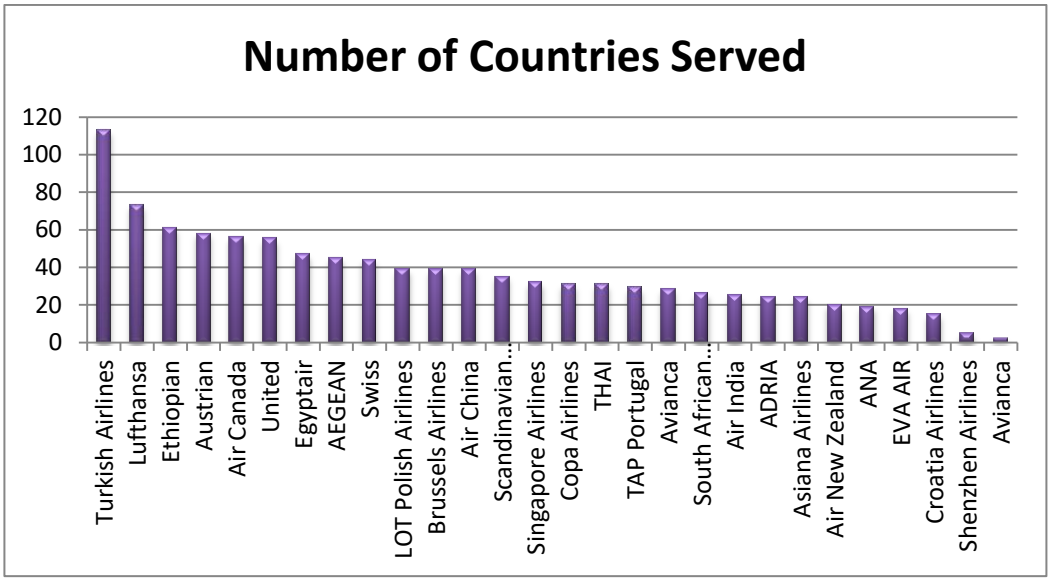

Figure 4 Number of Countries Served

Figure 4, illustrates the number of countries served per member airline of Star Alliance. Turkish Airlines is on the first place with 113. Perceived as a high amount when considering the number of aircrafts, which is only 170, and United Airlines has 1,265 aircrafts. Followed by Lufthansa with 73. United is on place six and handles 55 countries. One reason for this place could be that United mainly serve the USA which has bigger states than in Europe. Avianca, which is a small member airline, operates only two countries compared to Croatia Airlines, which is similar in terms of their infrastructure, serves 15 countries.

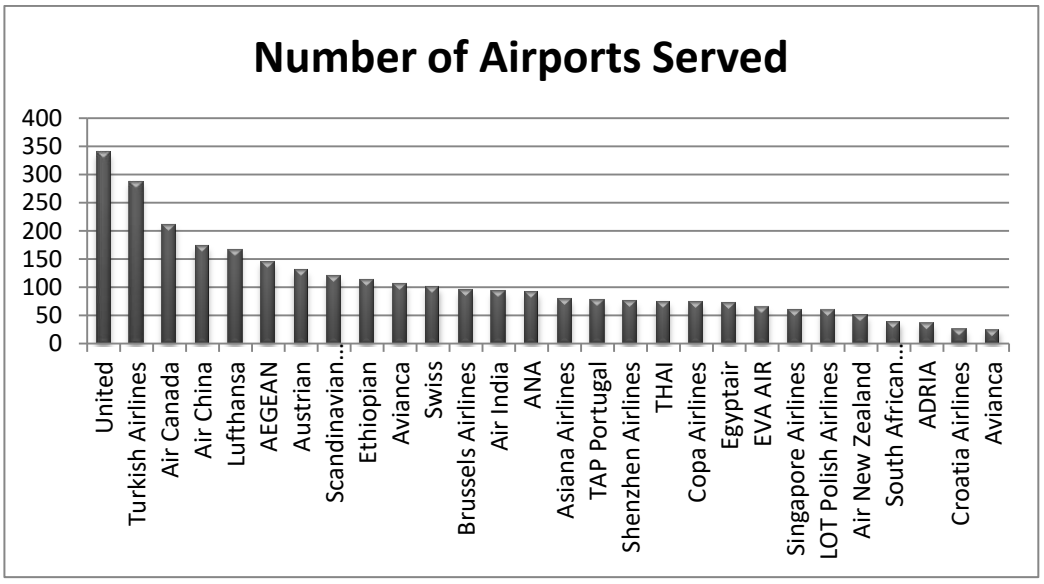

Figure 5 Number of Airports Served

Figure 5, is a diagram that shows the number of airports served by every associate airline. United Airlines is the company which operates most airports 339, this can be related to the high capacity of aircrafts. Surprisingly, Turkish Airline is on the second place with 287 destinations served. Followed by Air Canada which handles 210 airports. Lufthansa has occupied the second place in terms of the number of aircrafts, operates only 165 airports and is therefore on the fifth place. Croatia Airlines serves 25 destinations. Avianca operates just one airport less than Croatia Airlines, 24. This is the lowest number of airports served from all the member airlines of the Star Alliance Group.

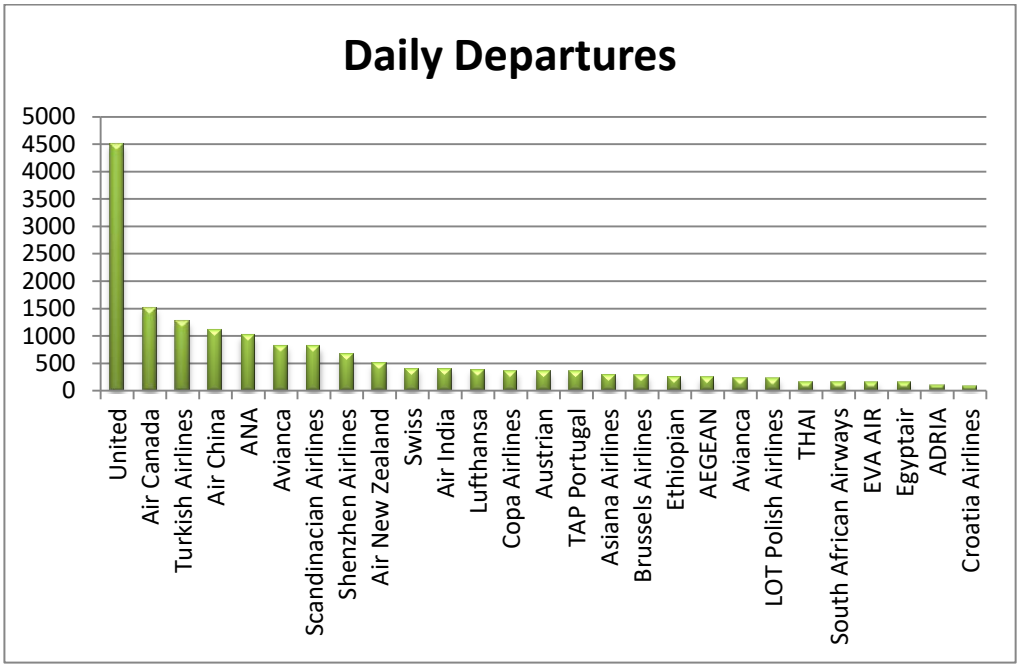

Figure 6 Daily Departures

Figure 6, presents the daily departures of the airlines within the Star Alliance Group. United Airline, which is the largest member of Star Alliance, is as well the one with most flights 4,500 on a daily basis. Air Canada, followed as the second largest with 1,500 departures on a day. Surprisingly, Lufthansa which has been the second largest airline, in terms of the number of aircrafts and employees, performs now in the lower middle at 382 daily flights. Croatia Airlines is in this diagram the one with the smallest number of everyday departures, 75. Unfortunately, Singapore Airlines does not provide any data on daily flights and is therefore excluded from this bar chart.

The subsequent table 1, illustrates the focus destinations of every associate airline of the Star Alliance Group. Ranked from the airlines with only one core airport, observed as mainly the capital cities. Followed by two and three focus terminals. Only two of all the associate companies focus on four destinations, Air Canada and THAI. United is the only airline which relies on eight hub airports, however only in the United States.

Airline	Focus Destination			
Austrian	Vienna			
Singapore Airlines	Singapore			
Air New Zealand	Auckland			
LOT Polish Airlines	Warsaw			
ADRIA	Ljubljana			
Croatia Airlines	Zagreb			
South African Airways	Johannesburg			
Swiss	Zurich			
Egyptair	Cairo			
Brussels Airlines	Brussel			
Ethiopian	Addis Ababa			
Copa Airlines	Panama City			
Eva Air	Taipei			
Air India	Dehli	Mumbai		
Asiana Airlines	Seoul	Incheon		
TAP Portugal	Lissabon	Porto		
Lufthansa	Frankfurt	Munich		
Turkish Airlines	Istanbul	Ankara		
AEGEAN	Athens	Thessaloniki		
Shenzhen Airlines	Shenzhen	Guangzhou		
Scandinavian Airlines	Copenhagen	Oslos	Stockholm	
ANA	Tokio	Haneda	Narita	
AIR China	Beijing	Chengdu	Shanghai	
Avianca	Bogota	San Salvador	Lima	
Avianca	Brasilia	Sao Paulo	Guarulhos	
Air Canada	Toronto	Montreal	Vancouver	Calgary
THAI	Bangkok	Chiang Mai	Phuket	Hat Yai
United	Chicago	Cleveland	Denver	Houston
	Los Angeles	Newark	San Francisco	Washington D.C.

Table 1 Focus Destination

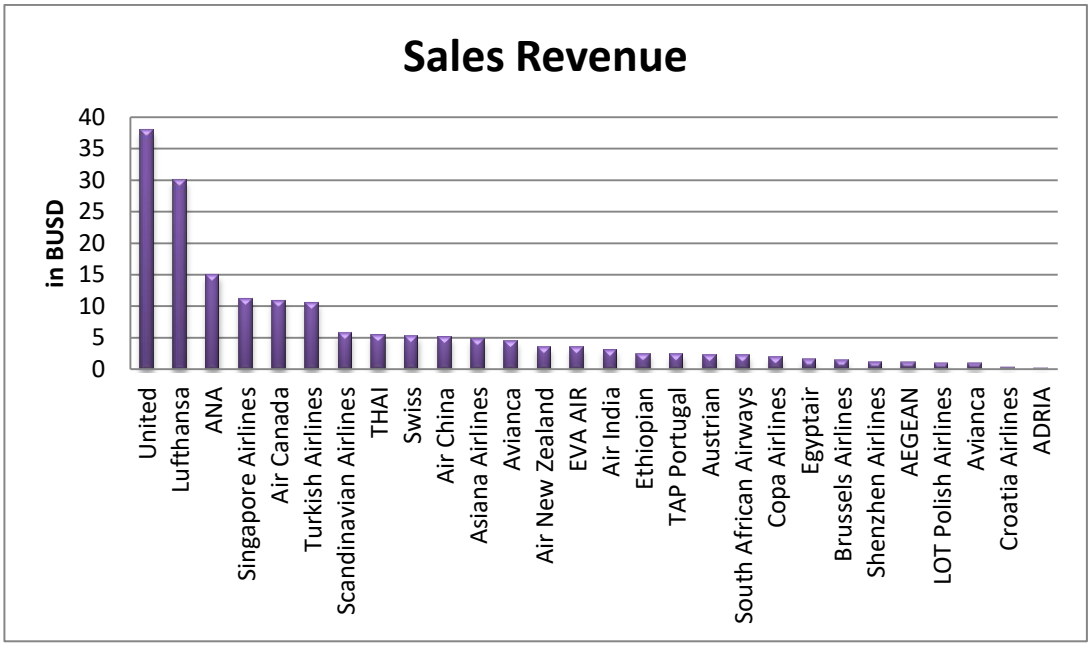

Figure 7 Sales Revenue

Figure 7, presents the sales revenue of every member airline. United, is the airline of Star Alliance with the greatest amount of sales revenue of 37,9 BUSD. Subsequently, Lufthansa yields a return of 30 BUSD which is compared to the size of United a higher revenue. Followed by ANA with 14,9 BUSD. The smallest number of sales return is ADRIA with 166 MUSD which is the smallest airline of Star Alliance. Although, Croatia Airlines employs more people than ADRIA, however with the same amount of aircrafts, still yields a higher sales revenue of 234 MUSD.

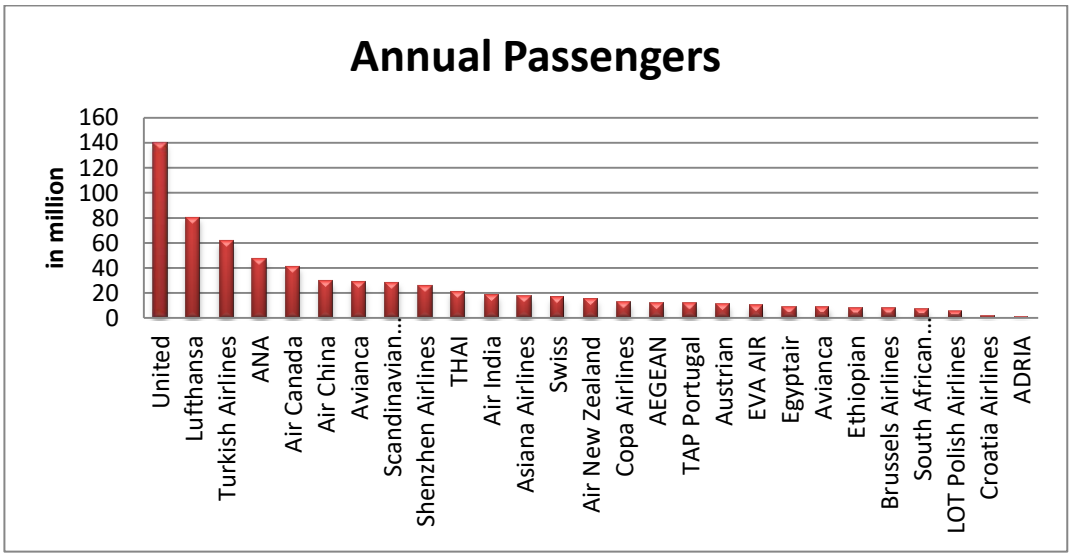

Figure 8 Annual Passengers

The graph 8, shows that United Airlines is again the enterprise located at the first place in terms of the annual amount of passengers of 140 million. The second place is Lufthansa with 80 million, which is nearly less than half of the first place. Followed by Turkish Airlines with 61 million costumers. Croatia Airlines transports only two million travelers a year and ADRIA half of it, only one million. Unfortunately, Singapore Airlines did not provide any information on the annual amount of passengers, they did only provide data of the revenue from travelers 94,27 visible in the subsequent diagram. Therefore, Singapore Airlines was excluded from this graph.

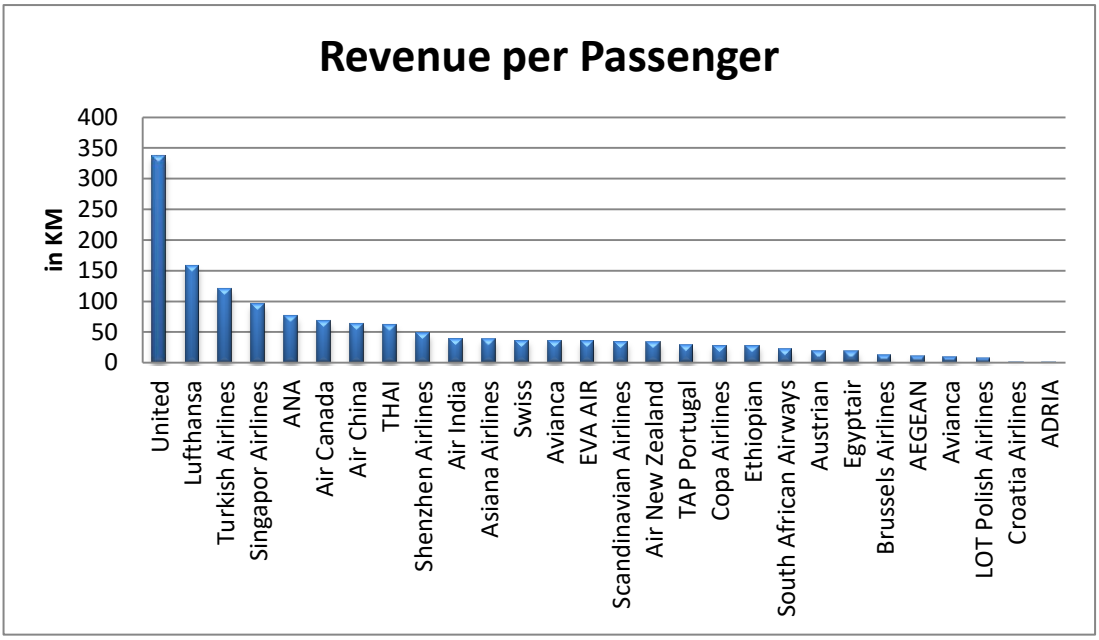

Figure 9 Revenue per Passenger

The revenue per passenger is presented, in figure 9. United's earnings per traveler is 336 which is the highest amount. Lufthansa yields a revenue of 157 followed by Turkish Airlines with a return of 119,32 per costumer. The lowest amount of earnings per passenger is Croatia Airlines with 1,37 followed by ADRIA with 1,29. When we compare annual passengers to the revenue per passenger we can identify that the first places as well as the last places, are still ranked the same. Small differences, in terms of the rank, can be observed in the medium of these two diagrams.

	Europe	N-US	Asia	Australia	Africa	S-US
Air Canada	x	x	x	x		x
Adria Airways	x					
Aegean Airlines	x	x	x	x	x	
Air China	x	x	x	x		
Air India	x	x	x	x	x	
Air New Zealand	x	x	x	x		
ANA	x	x	x		x	
Asiana Airlines	x	x	x	x		
Avianca Brasil	x	x				x
Avianca	x	x				x
Austrian	X	x	x			
Turkish Airlines	X	x	x		x	x
TAP Portugal	x	x			x	x
SWISS	X	x	x		x	x
South African Airways	x	x	x	x	x	x
Singapore Airlines	x	x	x	x		
Shenzhen Airlines			x			
LOT Polish Airlines	X	x	x			
EVA Air	x	x	x	x		
Ethiopian Airlines	x	x	x		x	x
EGYPTAIR	x	x	x	x	x	
Copa Airlines		x				x
Brussels Airlines	X	x	x		x	
Lufthansa	X	x	x	x	x	x
Scandinavian Airlines	X					
THAI	x		x	x		
United	x	x	x			
Croatia Airlines	X					

Table 2 Continents Served

Table 2, illustrates the route map of each airline in a table. Europe, North America as well as Asia are the most connected continents. Nearly all member airlines operate theses three parts of the world. Shenzhen Airlines and Copa Airlines are the only ones that do not fly to Europe at all. To both destinations, North America as well as to Asia, do not fly five airlines. However these are not always the same. Adria Airline, Scandinavian Airlines and Croatia Airlines do not handle both continents. Whereas, Shenzhen Airlines and THAI do not serve the North American market. Additionally, the Asian continent is not operated by Avianca, Avianca Brazil, TAP Portugal and Copa Airlines. Surprisingly, because of Australia's size, twelve airlines serve this continent, more than South America and Africa. Unexpectedly, one airline more serves the African Continent,11, than South America,10.

4.2 Identification of Airlines within the Star Alliance Group and their attitude towards Environmental Sustainability

	Economy	Flexible Economy	Premium Economy	Business	First	Elite
Air Canada	X		X	X	X	
Lufthansa	X		X	X	X	
Scandinavian Airlines	X		X	X	X	
THAI	X			X	X	
United	X			X	X	
Air New Zealand	X		X	X		
ANA	X	X	X	X	X	
Austrian	X			X		
Singapore Airlines	X		X	X	X	X
Asiana Airlines	X			X	X	
LOT Polish Airlines	X		X	X		
ADRIA	X	X		X		
Croatia Airlines	X	X		X		
TAP Portugal	X			X		
South African Airways	X			X		
Swiss	X			X	X	
Air China	X			X	X	
Turkish Airlines	X			X		
Egyptair	X			X		
Brussels Airlines	X	X	X	X		
AEGEAN	X	X	X	X		
Ethiopian	X			X		
Copa Airlines	X			X		
Avianca	X			X		
Shenzhen Airlines	X			X	X	
EVA AIR	X		X	X	X	X
Air India	X			X	X	
Avianca	X			X	X	

Table 3 Travel Classes

Table 3, demonstrates several travel classes. All the member airlines of Star Alliance consist of an economy class and a business class, at least. Furthermore, some associates include flexible economy classes which offer the cheapest fares, because passengers can only carry hand baggage with them. Other airlines provide premium economy classes which are a little bit more expensive but far away from business class prices. Premium economy seats usually provide more space and they are larger in their size. Moreover, more than half of the enterprises offer first class opportunities for their distinctive clientele. The airlines that focus on high-end passengers are only two with one class above first class. EVA Air and Singapore Airlines offer Elite and Suites for their most demanding travelers.

When an aircraft is fully booked, cheaper class flyers leave smaller footprints than more expensive class travelers. The reason is, that budget classes such as economy or flexible economy, have the capacity to carry more passengers than premium economy, business class or even first class. This assumption is not valid if a flight is not operating at a full capacity. Therefore, the amount of travelers carried per class is important when considering the individual footprint. However, everyone is looking for travelling more comfortable instead of environmental save. The controversial act is that airlines promote upgrades to travel in higher classes and at the same time highlighting their environmental contribution. This action is considered as greenwashing, and can be related back to the theoretical part of this thesis, to one sign of greenwashing (Marketing Inc, 2007).

Airline	Loyalty	Airline	Loyalty Program
Lufthansa	Miles & More	Avianca	LifeMiles
Austrian		ANA	ANA Mileage Club
LOT Polish Airlines		EVA AIR	Infinity MileageLands
ADRIA		Air Canada	Aeroplan®
Croatia Airlines		Singapore Airlines	PPS Club / KrisFlyer
Swiss		Asiana Airlines	Asiana Club
Brussel Airlines		Scandinavian Airlines	Euro Bonus
Air China	PhoenixMiles	THAI	Royal Orchid Plus
Shenzhen Airlines		Air New Zealand	Airpoints™
Turkish Airlines	Miles&Smiles	TAP Portugal	Victoria
AEGAN	Miles+Bonus	South African Airways	SAA Voyager
United	Mileage Plus®	Egyptair	EGYPTAIR Plus
Ethiopian	ShebaMiles	Air India	Flying Returns
Copa Airlines	ConnectMiles	Avianca	Amigo

Table 4 Loyalty Program

Table 4, illustrates the different frequent flyer programs of the Star Alliance Group participants. Miles&More, is the largest and consists of seven airlines of the Star Alliance Group. Air China and Shenzhen Airlines share the same loyalty arrangement, PhoenixMiles. All the other airlines of Star Alliance have their own program for frequent travelers. These deals differ widely from each other in terms of mileage collection and spending as well as benefits received. Moreover, they vary in terms of their environmental contribution.

The Miles&More program does not provide any free benefit for environmental compensation. The only environmental support that they introduced, as already stated in the literature review, is that travelers have the opportunity, after they booked the flight, to calculate their individual CO2 emission. The contribution for passengers is that they can exactly support the amount of their individual CO2 emission into a project called `myclimate shape our future`. Lufthansa provides the possibility to support this project by using premium miles. The benefit of this CO2 compensation is shown directly next to the total price which raises awareness of the travelers. Consumers know that they harm the surrounding and have the opportunity to contribute positively with this program. All the other loyalty arrangements do not offer any contribution for environmental participation.

Moreover Star Alliance has its own frequent flyer program. Passengers of all the member airlines can join the Star Alliance Program and benefit with every flight with any member airline. Therefore, the Silver or Gold status can be achieved easier. However, some airlines use kilometers as their currency for frequent flyers. Sometimes these kilometers have to be converted into points to get credits for it. This transformation can lead to a reduction of the points already collected.

Members with the Star Alliance Gold status benefit from the following points:

- Priority baggage handling
- Airport lounge access
- Priority Reservation Wait List
- Priority boarding
- Priority stand-by
- Extra baggage allowance
- Gold Track (Priority Security & Immigration)

Members with the Star Alliance Silver status benefit from the subsequent points:

- Priority reservations waitlist
- Priority Stand-by

Neither Star Alliance nor any other member airline, offers free environmental supports when participating or achieving any special member status. This fact shows that passengers do not get the availability of choosing how to use their points wisely to contribute to a more eco-friendly earth. Customers who fly more often are pushed to travel even more to obtain a better status for receiving a free upgrade, flight or any other bonus. However, airlines do not obviously display, to passengers, that flying even more is not healthy for the environment. These travelers could contribute by choosing to support their surrounding as a free supplement when achieving a special member status. When the environmental support is not offered free of charge, the majority of travelers would hardly consider paying even more for flying.

	IATA	ISO 14001	ISO 50001	EMAS	IEnVA
Air Canada	X	X			
Lufthansa	X	X			
Scandinavian Airlines		X		X	
THAI	X	X			
United	X				
Air New Zealand	X	X			
ANA		X			
Austrian	X				
Singapore Airlines		X			
Asiana Airlines	X	X			
LOT Polish Airlines	X				
ADRIA	X				
Croatia Airlines	X				
TAP Portugal	X				
South African Airways					Stage2
Swiss	X				
Air China	X	X	X		
Turkish Airlines		X			
Egyptair	X	X			
Brussels Airlines	X				
AEGEAN	X	X			
Ethiopian	X				
Copa Airlines	X				
Avianca	X	X			
Shenzhen Airlines	X	X			
EVA AIR	X	X			
Air India	X				
Avianca	X	X			

Table 5 Environmental Certificates

Table 5, displays the environmental certificates which are a good way of green marketing activities to contribute to environmental safe air travel. The highlighted certificates in this table are IATA, ISO 14001, ISO 50001, EMAS and IENVA. International Air Transport Association mentioned as IATA, operates with airline associates and the air transport sector. The primary goal of this program is to encourage environmental awareness and to protect air travel for consumers. ISO 14001 certificate are planet friendly standards on an environmental management system (EMS). ISO 50001 certificate including an energy management system (EnMS) to use energy more efficiently. The EU Eco-Management and Audit Scheme (EMAS) is an administrative system which helps to impair the environmental performance of a company. The IATA Environmental Assessment (IEnvA) is a system to support airlines ecological achievements.

The certificates in the table are not a standard requirements before entering, into Star Alliance. As presented in the literature review, Star Alliance does only require their own set of environmental standards, to be fulfilled. These are five goals, the first requirement is the introduction of a management system, the second obligation is to operate according to earth friendly laws. Third, encourage business only with stakeholders that operate responsible in the territory. Fourth, enhance eco-friendly technology. Fifth, promote permanent environmental commitment and improvement.

Furthermore, the table of Environmental Certificates provides the information, that only one airline, South African Airways, fulfills the requirements of the IEnVA, Stage 2. All other airlines cannot keep up with South African Airways. The second airline which contributes most to a better environment is Scandinavian Airlines, which obtains the EMAS certificate. Air China is the only airline that received the ISO 50001 certificate. South African Airways, Scandinavian Airlines and Air China promote commitment to environmental safe air travel through their contribution of obtaining CSER certificates.

As discussed in the literature review, there are five motivators to obtain an eco-friendly certificate. The first motivation is that *financial benefits* can be received because of environmental changes such as fuel reduction. The second impulse is the *competitive advantage*, consumers perceive that these airlines contributes to a better environment and therefore they prefer flying with them. The third driver for an airline is *image enhancement,* to acquire such a label can improve the perception that people had of this brand and turn it into a positive picture. The fourth driver is the *satisfaction of the green consumer,* airlines feel the increasing pressure of stakeholders and therefore they satisfy this with an ecological document. The last incentive is that obtaining an eco-friendly certificate, *avoids regulatory actions* such as penalties and negative advertisements.

CSER Airline Slogans

Air Canada	Air Canada. Defy obstacles.
Lufthansa	There is no better way to fly
Scandinavian Airlines	We are travelers
THAI	We reach for the sky
United	Fly the Friendly skies
Air New Zealand	Nobody does it better
ANA	Hello Blue, Hello Future
Austrian	The most friendly airline
Singapore Airlines	A great way to fly
Asiana Airlines	Always with you
LOT Polish Airlines	You´re under our wing
ADRIA	Taking off to the future
Croatia Airlines	More than a comfortable flight
TAP Portugal	Big enough...Small enough
South African Airways	We make the difference
Swiss	The world's most refreshing airline.
Air China	Life well travelled
Turkish Airlines	Widen your world
Egyptair	Enjoy the sky
Brussels Airlines	We go the extra smile
AEGEAN	Feel the difference
Ethiopian	The wonderland route
Copa Airlines	Connected, everything is possible
Avianca	It's for you
Shenzhen Airlines	Consider at any time Shenzhen Airlines
EVA AIR	Fly EVA air and feel the difference
Air India	The airline that's different. And better.
Avianca	The way Brazil connects with the world

Table 6 CSER Airline Slogans

As table 6, shows the contribution to environmental sustainability through CSER slogans used by associate member airlines. These expressions are frequently updated, without neglecting the meaning of it. Some of these idioms do not differ much from each other, they just promote the ´feel good´ atmosphere. Another example, is the slogan of Star Alliance itself which is the network for earth. Additionally, most highlight that they are different, better and connected to contribute to an impaired future. There is no expression which stands out and makes a difference to any CSER contribution.

	Aircraft Types
United	A319/A320, B737-700/800/900, B747-400; B757-200/300, B767-300/400, B777-200, B787-8/9. Regional: ATR 42, Bombardier CRJ; Bombardier Q200/Q300, Embraer E-170/E-175, Embraer 135/ERJ
Lufthansa	A319, A320, A320 neo, A321, A330, A340, A380, B747, Bombardier CRJ, Embraer ERJ
Air China	B737, B747, B777, B787, A350, A330, A321, A320, A319
Air Canada	B787-8, B787-9, B777-300, B777-200, B767-300, A330-300, A321-200, A320-200, A319-100, Embraer 190, Embraer 175, CRJ 705, CRJ 100/200, Bombardier Dash 8 400/300/100
Turkish Airlines	A340-300, A330-300, A330-200, A321-200, A320-200, A319-132/100, B777-300 ER, B737-800, B737-700, A310 CARGO, A330-200F CARGO, B737-900 ER, B747-400F, A300-600F
ANA	B747-400, B777-300, B777-200, B787-8, B787-9, B767-300, B737-800, B737-700, B737-500, A320, DHC8-400, DHC8-300
Avianca	B787- Dreamliner, A330, A321, A320, A319, A318, Embraer 190, ATR-42, ATR-72, Cessna-208, A330F
Shenzhen Airlines	A319, A320, B737
Scandinavian Airlines	A340-300, A330-300, A319, A320, A321, B737-600/700/800, Bombardier CRJ900, ATR-72 and SAAB 2000
Air India	B747-400, B777-200LR, B777-300ER, B787-800, A319, A320, A321
Air New Zealand	B777-300ER, B777-200ER, B787-9, B767-300ER, A320-shorthaul, A320-Domestic, A320/A321 NEO, ATR72-600, ATR72-500, Q300,
Singapore Airlines	A330-300, A380-800, A350-900, B777-200, B777-200ER, B777-300, B77-300ER
Copa Airlines	B737-700, B737-800, Embraer 190
THAI	A380-800, A350-900, B747-400, B777-300, B777-300ER, B777-200, B777-200ER, A330-300, B787-8, A320-200, B737-400, A320- 200 (THAI Smile)
Swiss	A340-300, A330-300, A321, A320, A319, Avro RJ100, B777-300ER,Bombardier C Series
Asiana Airlines	A380-800, A330-300, A330-200, A321-100/200, A320-200, B777-200ER, B747-400/Combi/SF/F, B767-300/F
Ethiopian	B787, B777-300ER, A350-900, B777-200LR, B777F, B757-200F, B767-300, B737-700, B737-800NG, Q400 NG
TAP Portugal	A330-200, A340-300, A319, A320, A321
Austrian	B777-200, B767-300, A321, A320, A319, Embraer 195, Fokker 100, Fokker 70, Bombardier Q400
EVA AIR	B777-300, B747-400, A330-300, A330-200, A321-200, MD-11, ATR72-600
Egyptair	B777-200 , B777-300ER , A340-200, A330-300, A330-200, A321-200, A320-200, B737-500, B737-800, Embraer E-170 and A300-600 freighter
South African Airways	A340-600, A340-300e, A330-200, A320-200, A319-100, B737-800 and B737 Freighter aircraft
Brussels Airlines	A330-200/300, A319; A320, AVRO RJ100, DH8-Q400
AEGEAN	Airbus A321 – 200, A320 – 200, A319 – 200
LOT Polish Airlines	B787-8, B737-400, Embraer 195, Embraer 175, Embraer 170, Bombardier Dash Q400
Avianca	A318, A319, A320, A330, Fokker F70/F100
ADRIA	A319, CRJ900, CRJ700
Croatia Airlines	A320-200, A319-100, Dash 8-Q400

Table 7 Aircraft Types

Table 7, illustrates the different types of aircrafts used by the member airlines of the Star Alliance Group. The following five variations of planes are mostly named after their manufacturer companies, Airbus, Boeing, Bombardier, Embraer, Cessnar, and Fokker. These enterprises obtain different aircrafts in their portfolio, as shown by the airlines who operate several of them. The two largest airplanes that currently exist on this planet are Airbus 380-800 and Boeing 777-300. Air Canada, ANA, Singapore Airlines, THAI, Asiana Airlines and EVA AIR are owners and operators of the largest aircrafts. Some airlines have extra freighter aircrafts for transportation purposes only, they are also large in size. These airlines are South African Airways and Egyptair. All the other airlines consist of middle sized as well as smaller airplanes. Embraer, Bobardier, Cessnar and Fokker focus primarily on airplanes covering regional areas, therefore they target on the production of small aircrafts.

Table 8, shows member airlines overall contribution to environmental sustainability. Associate airlines have included different strategies to cope with the changing climate on earth. These strategies purpose is the same target, is illustrated in the subsequent table.

Green Initiatives of All Star Alliance Airlines	
Ground	sustainable construction & modernizations
	technological process
	manage energy and resources
	electro mobility alternatives
	recycle aircraft components
	climate protection (voluntary CO2 compensation)
	sustainable products, services and partners
Mobility	car sharing
	ICE high-speed rail connections
	long-distance & postal busses
Air	alternative fuels (bio-fuels)
	fuel efficiency & carbon management
	support climate research
	reduce weight in the aircraft
	participate in air space management
	active noise protection & reduction
Travel	online tickets, mobile boarding passes
	Ejournals
	digital baggage services

Table 8 Green Initiatives

Six Clues of Greenwashing Identified with Star Alliance and Its Member Airlines

The six signals have been developed by Marketing Inc. in 2007, to identify greenwashing. Which has been discussed in the theoretical part of this dissertation. The following signals illustrate the commitment of Star Alliance to green marketing strategies as well as to greenwashing.

1) hidden trade off ⟶ upgrades, freighter transports

Mentioned as the first sign of deceptive eco-friendly marketing, the hidden-trade off, where an airline focuses on a particular area to be free from pollution but does not consider all other factors. The controversial act is that airlines promote upgrades to travel in higher classes and at the same time highlight their environmental contribution through CSER-certificates and initiatives. This action is considered as greenwashing. Travelling in a higher class contributes more to environmental pollution than flying in the economy class if the airplane is operating at its full capacity. Airlines are one of the main contributors of climate change although they acquire earth safe certificates and campaigns. One example is South African Airways which obtains an IEnVA certificate, stage two. This certificate is recognized as a very high level of CSER commitment. They only highlight this certificate, neglecting the fact that they operate freight transports which are considered as the worst for the environment. Companies highlight this one eco-friendly contribution but continue with all other actions that are not safe for the territory.

2) fibbing ⟶ environmental standards, no recognized certificates required

Known as the second signal of greenwashing, is fibbing, using environmental friendly standards such as carbon management, fuel efficiency, alternative fuels such as bio-fuel, technological process, improved infrastructure, sustainable products, services and partners, as shown in table 8. These green initiatives are not comparable with real certificates such as IATA. Star Alliance standards of environmental commitment, required to be fulfilled before entering into the group, do not comply with the IATA or any other certificate. Although, this should be recognized as a standard measure to become a member airline.

3) Irrelevance ⟶ required by law

Irrelevance recognized as the third clue of greenwashing. Airlines have to fulfill several environmental obligations by law and not because it is a precondition by Star Alliance. Star Alliance set a view standards concerning environmental goals, which are already an obligation by the government. The environmental requirements set by Star Alliance, mentioned previously in the thesis, are just a claim to behave in a right way. There is no need for real CSER certificates.

4) no proof ⟶ green initiatives

The fourth sign of greenwashing is no proof. Airlines incorporated several green initiatives, all with similar goals. Star Alliance member airlines do not require to obtain any eco-friendly certificate before entering into the group. Although this should be one priority.

5) expressions of vagueness ⟶ slogans

Characteristic number five of deceptive ecological safe marketing strategies is expressions of vagueness. Airlines use slogans such as eco friendly, environmental safe and earth friendly. Star Alliance slogan for instance is, network for earth. These expressions do not clarify the six W questions, how, what, why, when, where and who. Moreover table number 5, illustrates the slogans of all member airlines of the Star Alliance Group.

6) a lesser of two evils ⟶ bio-fuel

The term bio-fuel is the sixth sign of greenwashing, lesser of two evils. Bio-fuel contains still fuel just with a sophisticated eco-friendly label. Moreover, trees have to be cut to plant for producing vegetable oil, which does not contribute to a better environment. Airlines have different arrangements, all with the same aim but no general agreement on environmental targets. The same is promoted over and over again with no real contribution of anyone anywhere. Therefore, it is difficult for passengers to distinguish who contributes to a better earth and who shows off with their environmental concerns but do nothing except greenwashing.

4.3 The Controversial Act of Environmentally Friendly Versus Green Washing Marketing Strategies of Big, Middle and Small Airlines

1) Big Airlines

In this thesis the considered big airlines of the Star Alliance Group are United, Lufthansa, Air Canada, Turkish Airlines and Air China. Hugh airlines have more money to spend in eco-friendly marketing campaigns compared to smaller airlines. Lufthansa known as one of the biggest airline, in the Star Alliance Group, initiated a big green marketing campaign. Similar to all other airlines, with a wrong claim of carbon offsetting. Known as flying with bio-fuel to contribute to a better environment, because Lufthansa requires 30 Million liter fossil fuel a day. Therefore, the Lufthansa Group primary focus is now on bio-fuel as a new source of kerosene. The issue with bio-fuel is that it needs land to be planted because it consists of vegetable oil. Therefore, researchers argue that cutting trees for planting and cropping vegetable oil, for producing bio-fuel is a contribution to greenwashing (Dale, 2015). Airlines highlight the positive aspects of bio-fuel, however they do not show the negative side effects of cutting trees. This activity is not environmentally friendly and may do more harm than positively contribute to less pollution. Moreover airlines cannot only use bio-fuel, because there are not enough resources available yet. This means that they are still using fossil fuel as their main source of kerosene. Additionally, big airlines pay much more for marketing campaigns than for real strategies. Not only, large players have the possibility to afford such initiatives. Furthermore, they also have to keep up their good reputation, as well as big airlines are well known all over the world. Larger recognized airlines have to contribute much more to a better environment because they are under pressure by the society. These increases the risk of green marketing campaigns that are in reality deceptive claims of green activities. Greenwashing is often the reality of earth friendly marketing. Unreal environmental concerns also occur because airlines target ecological concerns from small aircrafts to big aircrafts in the same way, they do not consider the size of the airplane, for different marketing purposes.

Bigger airlines can afford long as well as transatlantic flights because of a higher capacity of aircrafts. Although, long distance flights can only afford a small fraction of the overall pollution, it is important to consider every cause of climate change.

Research found that one flight crossing the Atlantic pollutes as much as driving a car for one year (Clark, 2017). Moreover big aircrafts which are used for long distance flights are much noisier. Additionally, there is a higher local air pollution between take off and landing.

2) Middle-Sized Airlines

Middle sized airlines of the Star Alliance Group are Shenzhen Airlines, Scandinavian Airlines, Air India, Air New Zealand, Copa Airlines, Swiss, Ethiopian, TAP Portugal, Austrian, Egyptair, South African Airways, Avianca, Brussels Airlines, AEGEAN, LOT Polish Airlines. The newest as well as largest aircrafts, like the Airbus 380-800 and Boeing 777-300, are used by ANA, Singapore, THAI, Asiana and EVA Air which are considered as middle sized airlines. Air Canada which is the only big airline operating one of the newest and largest aircraft. These two airplanes can carry more passenger at less pollution. This is a positive contribution to a safe earth. Although, only six airlines out of 28 of the Star Alliance Group can afford the newest aircrafts which is not even one fourth of all the member airlines. The biggest airline operators of the Star Alliance group should contribute most to green initiatives because they carry most passengers and operate most flights. Greenwashing also occurs because Star Alliance highlights, in their CSER standards, that member airlines should always keep up with eco-friendly stakeholders, in their surrounding, and act environmental friendly. This is only a claim, as we can see from this example, only six airlines contribute actively to a better environment through the use of newer, more efficient aircrafts including a higher capacity.

Freight aircrafts are used to transport goods from one continent to another one. Mostly non durable goods, because durable goods can be transported by ship. Freight aircrafts harm the environment most, which are used by Egyptair and South African Airways. South African Airways, recognized as one of the environmental friendliest airline of the Star Alliance Group with an IEnVA certificate, stage two, operates freight aircrafts. This contributes to greenwashing because consumers are informed about their CSER commitment which the Airline obviously highlights. Without showing that South African Airways still operates freight transports. An alternative on a continent is rail transport, which is one of the transport options which causes only little harm to the environment (Hecht and Dale, 2017).

3) Small Airlines

The small airlines of Star Alliance are Croatia Airlines, ADRIA and Avianca. These airlines have the advantage that most of their flights are short haul flights. This means that the environmental pollution of short flights is less than for long flights. Moreover, short haul flights use smaller aircrafts, unfortunately, small airplanes have more accidents, on average, than bigger once. These accidents are fatal because many people die or are injured. Another drawback is, which most people neglect, that an accident of an airplane is a big environmental disaster. It does not only destroy its surrounding of the location, where the accident occurred, it also pollutes the air and sea (Moshe and Rietveld, 2007).

4. Conclusion

4.1. Analytical Summary of the main results

Star Alliance established its business on May 14th, 1997 as the first global operator including five airlines, Air Canada, Lufthansa, Scandinavian Airlines, THAI and United. Nowadays, 27 airlines belong to the Group. The largest number of aircrafts is United with 1265 compared to Croatia Airlines and ADRIA with only 12 aircrafts. In the number of employees is United the leader with 87,500 and 55,000 by Lufthansa. ADRIA employs 388 whereas Croatia Airlines operates with 902. Turkish Airlines serves 113 countries, and Lufthansa only 73 which is less than half. Avianca operates only two countries. United Airlines number of airports served is 339, Croatia Airlines is 24 and Avianca 23. Daily departures of United are 4,500 and Air Canada departs only a quarter of United which is 1,500. Croatia Airlines operate 75 daily departures. United Airlines targets eight focus destinations with a sales revenue of 37,9 MUSD. All the other airlines operate mostly their capital cities as a hub airport. The annual amount of passengers by United is 140 and Turkish Airline is 61 whereas Croatia Airlines is two and ADRIA is one. The revenue per passenger of United is 336, Lufthansa 157 and Turkish airways 119,32. Croatia Airlines 1,37 and ADRIA 1,29. all airlines offer economy and business class. Only Singapore Airlines and EVA Air provide an elite class. Airlines mainly serve the continents Europe, North America and Asia. The Loyalty program Miles & More is used by seven airlines and Phoenix Miles by two airlines. All other airlines have their own loyalty program as well as the Star Alliance program itself which is available with every member airline of the group. Several certificates are obtained by the member airlines but only three of them by three airlines. EMAS by Scandinavian Airlines, EnVA by South African Airways and ISO 50001 by Air China. Slogans promote all the same, be better and different. New types of aircrafts exist, the largest available are Airbus 380-800 and Boeing 777-300. Six airlines, Air Canada, Ana Air, Singapore airlines, THAI, Asiana and EVA Air obtain the largest and newest aircrafts. Moreover, general environmental safe initiatives have been generated, which all airlines have in common. Furthermore, six signs of greenwashing have been identified as well as the greenwashing initiatives of small, middle sized and big airlines have been analyzed.

The subsequent research questions, listed already in the thesis objectives, are answered in this part of the paper.

1) How does the Star Alliance Group and its member airlines contribute to a better environment?

Star Alliance set several required environmental standards which need to be fulfilled before entering into the Group. These standards include five targets, the first requirement is the introduction of a management system, the second obligation is to operate according to earth friendly laws. Third, encourage business only with stakeholders that operate responsible in the territory. Fourth, enhance eco-friendly technology. Fifth, promote permanent environmental commitment and improvement.

2) What kind of CSER strategies do Star Alliance members employ?

Star Alliance member airlines obtain several CSER certificates. These certificates are IATA and ISO 14001 which are acquired most often. The primary goal of IATA is to encourage environmental awareness and to protect air travel for consumers. ISO 14001 certificate are planet friendly standards on an environmental management system (EMS). Whereas, each ISO 50001, EMAS and IEnVA are only obtained by three different airlines. Furthermore, general eco-friendly initiatives have been generated, which all airlines have in common.

3) Do Star Alliance members employ any deceptive claims leading to greenwashing activities?

Yes, six signs of greenwashing have been identified. These are hidden trade of, fibbing, irrelevance, no proof, lesser of two evils and expressions of vagueness. These clues have been discussed in the theoretical part of this thesis, the literature review. Big, middle-sized and small airlines contribute differently to the environment, through green marketing and greenwashing. Furthermore, all green initiatives cannot compensate the environmental pollution of airlines.

4.2. Limitations and Recommendations

The limitations of this thesis is, the difficulty in comparing the different environmental contributions of each airline. Because, all airlines have an uncountable number of programs that contribute to the environment in their own way. They do not only have several programs, they do also have their own targets and strategies to cope with the changing climate. Additionally, researchers do only investigate in identifying which airline contributes to greenwashing. More research should be achieved in greenwashing of large enterprises, such as Star Alliance, which connects several airlines.

Another recommendation, targeted for environmental sustainability and a lower CO2 footprint, in the aviation industry, is increased capacity of aircrafts. The considered primary solution is to build aircrafts that can carry more passengers with only an economy class and therefore the amount of aircrafts flying can be reduced. Instead of only looking at how to fly one aircraft more efficient, airlines should concentrate on how to transport more travelers in one aircraft. Besides an decrease of the individual footprint, positively affects of the profit can be assumed. In 2012, Mayer, R., Ryley, T. and Gillingwater, D. researched about the perceived green image of airlines by consumers. As a result, consumers do not perceive that either low cost airline or full service airlines contribute in a different way to a better environment. Therefore, it would be interesting to see more research of perceived greenwashing of airlines by consumers.

This thesis is important for researchers and practitioners and strongly recommended to participate in, future research. The aviation industry, especially Star Alliance and its member airlines will further contribute to environmental initiatives and may also contribute to greenwashing initiatives. In the future, airlines primarily focus are point to point flights (no connecting flights). Flights do not require one stop, at least, to get from a smaller area, to a bigger area for crossing the Atlantic or for any long haul flights. This decreases the overall pollution of airlines and is much more efficient for the customer. Point to point flights are the future of the aviation industry, which reduces as well the number of short distance flights from one destination to another, just for taking the actual flight from the domestic airport to

the final destination. Most of the time the destination in between the final is not even on the actual route.

4.1. Final Statement

The purpose of this research was to identify if Star Alliance member airlines act environmentally friendly or contribute to greenwashing strategies. Therefore three main research problems, were addressed in the final part of this paper. The conclusions, which I drawn from my research, is that big airlines have an even more important image problem when involving in CSER or greenwashing marketing strategies. Although, all associate airlines contribute to environmental sustainability, they contribute as well to greenwashing through deceptive environmental friendly marketing claims.

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Appendices

	AIR CANADA	Lufthansa	Scandinavian Airlines	THAI	UNITED
Year	5/1997	5/1997	5/1997	5/1997	5/1997 10/2009 (CO)
Airports served	210	165	119	74	339
Daily departures	1500	382	805	153	4,500
Aircrafts	365	424	152	95	1,265
Passengers Annually	41 m	80 m	28,1 m	21,2 m	140 m
Countries Served	56	73	35	31	55
Revenue Passenger KM	67.54 bn	157 bn	33,8 bn	60,89 bn	336 bn
Sales Revenue	10,85 BUSD	30 BUSD	5,70 BUSD	5,31 BUSD	37,9 BUSD
Employees	30,000	55,000	11,288	22,684	87,500
Focus Destination	Toronto Montreal Vancouver Calgary	Frankfurt Munich	Copenhagen Oslo Stockholm	Bangkok Chiang Mai Phuket Hat Yai	Chicago Cleveland Denver Houston Los Angeles Newark San Francisco Washington D.C.
Loyalty Program	Aeroplan®	Miles & More	Euro Bonus	Royal Orchid Plus	Mileage Plus®
Classes	Economy Premium Economy Business First	Economy Premium Economy Business First	Economy Premium Economy Business First	Economy Royal silk Royal first	Economy Business First
CSER Certificates	IATA ISO 14001	IATA ISO 14001	ISO 14001 EMAS	IATA ISO 14001	IATA

	AIR NEW ZEALAND	ANA	Austrian	SINGAPORE AIRLINES
Year	3/1999	10/1999	3/2000	4/2000
Airports Served	50	91	130	60
Daily Departures	500	1001	350	
Aircrafts	104	246	78	104
Passengers Annually	15+ m	47 m	11 m	
Countries Served	20	19	58	32
Revenue Passenger KM	33,2 bn	75,35 bn	18,19 bn	94,27 bn
Sales Revenue	3,5 BUSD	14,9 BUSD	2,3 BUSD	11,1 BUSD
Employees	11,500	13,000	6,200	14,046
Focus Destination	Auckland	Tokio Haneda Narita	Vienna	Singapore
Loyalty Program	Airpoints™	ANA Mileage Club	Miles & More	PPS Club / KrisFlyer
Classes	Economy Premium economy Business premier	Economy (small budget) Economy (flexible) Premium economy Business First	Economy Business	Economy/New economy Premium economy Business First Suites
CSER Certificates	IATA ISO 14001	ISO 14001	IATA	ISO 14001

	ASIANA AIRLINES	LOT POLISH AIRLINES	ADRIA	CROATIA AIRLINES
Year	3/2003	10/2003	9/2004	12/2004
Airports Served	78	59	35	25
Daily Departures	295	211	88	75
Aircrafts	83	43	12	12
Passengers Annually	17 m	5,17 m	1,24 m	1,85 m
Countries Served	24	39	24	15
Revenue Passenger KM	37,6 bn	7,09 bn	1,29 bn	1,37 bn
Sales Revenue	4,71 BUSD	888 MUSD	166 MUSD	234 MUSD
Employees	10,065	2,360	388	902
Focus Destination	Seoul Incheon	Warsaw	Ljubljana	Zagreb
Loyalty Program	Asiana Club	Miles & More	Miles & More	Miles & More
Classes	Economy Business first	LOT economy LOTpremium economy LOT business	Classic Flexible business	FlyOpti FlyFlexi FlyBizz
CSER Certificates	IATA ISO 14001	IATA	IATA	IATA

	TAP PORTUGAL	SOUTH AFRICAN AIRWAYS	SWISS	AIR CHINA
Year	3/2005	4/2006	4/2006	12/2007
Airports Served	77	38	100	173
Daily Departures	350+	153	400	1100
Aircrafts	80	53	94	366
Passengers Annually	11,3 m	6,9 m	16,3 m	28,98 m
Countries Served	29	26	44	39
Revenue Passenger KM	28,15 bn	21,8 bn	35,7 bn	63,7 bn
Sales Revenue	2,39 BUSD	2,2 BUSD	5,1 BUSD	5,05 BUSD
Employees	7,300+	8,525	8,564	27,442
Focus Destination	Lissabon Porto	Johannesburg	Zurich	Beijing Chengdu Shanghai
Loyalty Program	Victoria	SAA Voyager	Miles & More	PhoenixMiles
Classes	Economy Business	Economy Business	Economy Business First	Economy Business First
CSER Certificates	IATA	IEnvA Stage 2	IATA	IATA ISO 14001 ISO 50001

	TURKISH AIRLINES	EGYPTAIR	brussels airlines	AEGEAN	Ethiopian
Year	4/2008	7/2008	12/2009	6/2010	12/2011
Airports Served	287	71	93	145	113
Daily Departures	1,268	144	280	246	253
Aircrafts	299	63	49	47	82
Passengers Annually	61,2 m	8,66 m	7,5 m	11,6 m	7,6 m
Countries Served	113	47	39	45	61
Revenue Passenger KM	119,32 bn	17,18 bn	12,23 bn	9,98 bn	27,2 bn
Sales Revenue	10,52 BUSD	1,50 BUSD	1,398 BUSD	1,004 MUSD	2,42 BUSD
Employees	22,030	9,000	3,400	2621	12,703
Focus Destination	Istanbul Ankara	Cairo	Brussel	Athens Thessaloniki	Addis Ababa
Loyalty Program	Miles&Smiles	EGYPTAIR Plus	Miles & More	Miles+Bonus	Sheba Miles
Classes	Economy business	Economy business	Check & go Light & Relax Flex & Fast Bizz & Class	Economy Go light flex Business	Economy Business
CSER Certifcates	ISO 14001	IATA ISO 14001	IATA	IATA ISO 14001	IATA

	CopaAirlines	Avianca	深圳航空 Shenzhen Airlines	EVA AIR	Air India	Avianca
Year	06/2012	06/2012	11/2012	06/2013	07/2014	06/2015
Airports Served	73	105	75	64	92	24
Daily Departures	353	820	662	147	400	220
Aircrafts	100	170	165	74	106	41
Passengers Annually	12,38 m	28,3 m	25,50 m	10 m	17,9 m	8,3 m
Countries Served	31	28	5	18	25	2
Revenue Passenger KM	27,4 bn	35,5 bn	48,01 bn	35,28 bn	38,55 bn	8,93 bn
Sales Revenue	1,94 BUSD	4,4 BUSD	1,08 BUSD	3,43 BUSD	3,1 BUSD	841 MUSD
Employees	8,754	21,000	17,049	9,200	19,285	4,287
Focus Destination	Panama City	Bogota San Salvador Lima	Shenzhen Guangzhou	Taipei	Dehli Mumbai	Brasilia São Paulo-Guarulhos
Loyalty Program	Connect Miles	LifeMiles	Phoenix Miles	Infinity Mileage Lands	Flying Returns	Amigo
Classes	Economy Business	Economy Business	Economy First Business	Economy Business Royal laurel Premium laurel Elite	Economy Executive First	Economy Business first
CSER Certificates	IATA	IATA ISO 14001	IATA ISO 14001	IATA ISO 14001	IATA	IATA ISO 14001