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SHAPING THE INDUSTRY WITH A NEW STANDARD: ENVIRONMENTAL LABELS IN THE AVIATION INDUSTRY

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Abstract:

Several attempts have been made to make the aviation industry more sustainable with the help of environmental standards. This paper presents the idea of a new standard: the introducing an eco-label into the aviation industry. For this purpose 12 interviews with industry experts were conducted and thematically analyzed. It was discussed how environmental labels could be realized in the aviation industry. Eco-labels were seen as a useful tool for making environmentally informed choices. However, finding industry wide common agreement on eco-labels was seen as difficult and it would require an independent authority to set the right standards and rules.

Keywords: Environmental Label, Eco-Label, Sustainability, Environmental Standard.

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INTRODUCTION

Air transportation has become an essential part of our everyday life and the tourism industry and our global economy heavily depends on it. However, the environmental impacts of aviation are tremendous and are still increasing due to a continues and strong growth of the industry (Gössling and Peeters, 2007; Sausen et al., 2005). Nevertheless, many attempts have been made to reduce the environmental impacts in order to make this industry more sustainable. According to ICAO (2014) these are based on standards, policies and guidance addressing aircraft noise and engine emissions, operating procedures, optimization of air traffic, land-use planning and market driven measures. Among the market driven measures are taxes and charges, emission trading systems or the use of voluntary schemes such as carbon offset.

This study looks beyond existing market driven measures and presents instead a completely new market driven approach which so far hasn't received much attention in the aviation industry: the use of eco-labels. Environmental labels or eco-labels are tools that provide the buyer with information on the environmental impacts of products or services (Bratt et al., 2011; Buckley, 2002). They allow the buyer to compare different products or services based on their environmental performance. Eco-labels can help change consumption patterns by stimulating more sustainable purchase, and at the same time also motivate producers or service providers to raise their environmental standards (Gallastegui, 2002).

So far the idea of using eco-labels in the aviation industry hasn't received much attention in the literature and only two studies have mentioned the idea as such (Araghi et al., 2014; Gössling et al., 2009). However, both studies have failed in discussing the idea more in-depth by asking why and how an eco-label should be introduced into the aviation industry. This article aims on bringing more understanding on the idea of using eco-labels in the aviation industry and tries to explore how eco-labels could make the aviation industry more sustainable by creating a new standard. The study tries to address the following question: How should an aviation eco-label be designed and how could it be introduced into the aviation industry?

Prior research has shown that the success of introducing a new eco-label depends primarily on how it is designed, the clarity of criteria and process, the customer specific features and the potential benefits for the producer (Anderson et al., 2013; Buckley, 2002; Gallastegui, 2002). Aviation is a rapidly growing industry with huge environmental impacts but no industry wide eco-label exists that would support the air traveler in selecting more environmentally friendly flight options. Thus there is a need to study how an industry wide eco-label could be introduced in the aviation industry. We contribute this need by exploring the expert's views on the introduction of an industry wide aviation eco-label. For this purpose 12 interviews with aviation industry experts were conducted and thematically analyzed. The study shows that according to the expert views there is a clear need existing for introducing an industry wide eco-label in the aviation industry. Not only would this help to provide air travelers with environmental information on different flight options, finally making flights environmentally comparable, it would also help to build more environmental awareness among air travelers and satisfy the need of those who are already searching for environmental information of flights. Further it would stimulate more environmental competition between airlines, bringing competitive advantage to those carriers which are going beyond compliance (Grankvist et al., 2004). At the same time it would also motivate those airlines to improve their performance which only achieve a low environmental rating, increasing the environmental performance of the entire industry. Finally the study also found that there should be only one eco-label released within the aviation industry which however, should be compulsory to all flights and be introduced by an independent authority in order to ensure credibility and trustworthiness.

The study is structured as follows: we begin with a narrative on eco-labels which have already been used in the aviation industry. We then review research on what influences the introduction of new eco-labels and discuss especially the aviation specific features. We continue by explaining the data and methods used. We then represent the results of the study and conclude by discussing the contributions and implications of this study.

ECO-LABELS IN THE AVIATION INDUSTRY

Since Flybe (2014) introduced the first aviation eco-labelling scheme in June 2007 a lot of discussions among various groups of aviation stakeholders regarding the need and importance of such a labelling scheme have occurred. The eco-label presented by Flybe was developed in cooperation with Deloitte & Touche consultancy and provides simple information in form of an energy-label, similar to the one known from white goods, on the environmental performance of aircrafts used within the Flybe fleet. The eco-label rates the local environmental impacts such as noise, take off & landing emissions and air quality, the environmental impacts of the journey such as fuel consumption and CO_2 emissions per seat as well as the passenger environment such as the minimum leg room and number of seats per aircraft. Flybe is using this eco-labelling scheme in its online booking system but the label is also placed on their aircrafts. The methodology of the scheme is openly available and allows any airline to calculate the environmental impacts of their individual aircrafts and to produce their own eco-label. So far not many airlines have followed this example, the only case known is Thomas Cook (2014) that has adopted the Flybe scheme and uses the same kind of eco-label on the fuselage of its UK based fleet and in its environmental communication.

Based on the idea exposed by Flybe, the findings from the Stern Review and after hearings with representatives from IATA, British Airways, Virgin Atlantic and Easyjet the UK House of Commons Treasury Committee (2008) recommended to the aviation industry to join forces in developing a common industry eco-label scheme. This scheme should independently rate the environmental impacts of each flight and the information should been made available for passengers at the point of purchase. While this would help passengers to make more environmentally-conscious choices, at the same time it would also encourage airlines to improve their environmental performance which could then lead to more competition. The airline's representatives present at the committee hearing by that time, agreed to commit to this goal. However, since then no further steps have been taken by airlines in order to develop an industry eco-label scheme which perhaps might have been caused by the break out of the financial crises in 2008.

Nevertheless, two other industry players could have been identified that have become active in the development of an aviation eco-label. The first one being the Dutch ticket provider CheapTickets.nl who integrated an energy label called "eco value" into its flight booking site in 2008 (PR Newswire, 2014). This energy label rated all flight options displayed according to their environmental impacts through a scale from A to E by taking the flight distance and amount of stopovers into account. This gave the customers of CheapTickets.nl the chance to easily compare and choose from different flight options not only by the price, departure/arrival times or airline but also according to environmental aspects. As indicated on their website there were also future plans to integrate the aircraft type and other factors into the calculations however, meanwhile the eco value has been removed from the booking site and is no longer used by CheapTickets.nl (2014). The latest development comes from the German based climate protection organization and aviation carbon offset provider Atmosfair. Atmosfair (2014) has since 2011 annually released the so called Atmosfair Airline Index which ranks and compares almost 200 airlines

according to their environmental efficiency. The results are presented in an energy label like rating which ranges from A to G. Passenger Load Factors and the aircraft type used by the airline have the strongest impact on the calculations however, seat and cargo capacity as well as the engines installed on the aircraft are also taken into account.

Even though the importance of an aviation eco-label scheme has been understood and several attempts have been made by various industry players to develop such a label, no industry wide standard exists so far. Currently the air traveler is not able to make environmentally-conscious decisions as he or she is not able to compare different flight options concerning environmental impacts at the time when the booking decision is made. However, from the above presented eco-label options the idea presented by CheapTickets.nl fulfills probably the above presented targets or air traveler needs best. Therefore this eco-labelling scheme was also used as an example in the research interviews conducted with the aviation industry expert for the purpose of this study. Whether and how such an aviation eco-label could be introduced industry wide is the major objective of this paper.

CRITICAL ISSUES FOR THE INTRODUCTION AND SUCCEES OF ECO-LABELS

Prior research has made important contributions on showing the importance of eco-labels for more sustainable consumption decisions. Without compromising consumer's freedom of choice an eco-label can promote more sustainable consumption. As it also lowers search costs, the chance that it will be taken into account by consumers increases. It transforms credence attributes into search attributes and has also the function of an reminder (Bratt et al., 2011; Thogersen et al., 2010) We reviewed this research from the point of view of what was shown to be critical for the introduction and success of a new eco-label. The research has shown how the success of introducing a new eco-label depends on the design of the label, clarity of criteria and process, customer group specific features and may be supported by the benefits for companies.

First, the design of eco-label should be based on the identification of need. Before introducing an eco-label into a new industry or market it is essential to find out whether there is demand for such a label (Anderson et al., 2013; Gallastegui, 2002). The eco-label should then be designed in a way that it supports the consumer in his or her decision making when comparing different products regarding their environmental impacts. The eco-label needs to define, compile, test and summarize the environmental performance of each product and present it to the consumer in the easiest way possible (Buckley, 2002; Gallastegui, 2002). It has also been suggested that eco-labels need to be enforced by policy makers and environmental regulation (Grankvist et al., 2004; Buckley, 2002).

Second, the clarity of criteria and process for product eco-labelling was shown to influence the eco-label introduction. Concerning the criteria the particular environmental parameter or issue to which the eco-label refers need to be clearly stated (Buckley, 2002), communicated (Thogersen et al., 2010) and there should be no language barrier hindering the understanding (Houe and Grabot, 2009). The degree of consensus regarding the meaning and significance of terms used in the eco-label, that the terminology used in the communication of the eco-label is clearly defined and that the practices undertaken or outcomes of the eco-label are transparent and understandable to all parties involved (Buckley, 2002). van Amstel et al. (2008) suggest that the reliability of an eco-label consists of four aspects: mention of biodiversity, reference to rule of law to assure buyers' confidence, notification of farmer's compliance and information on ecological impact. Furthermore, Bratt et al. (2011) and Gallastegui (2002) added that the criteria for an eco-label need to be strategically developed, meaning that objectives being clearly defined and strategies to reach these objectives clearly laid out. Consumers must be

informed on the eco-label's meaning, characteristics, requirements, guarantees provided etc. to avoid unclear and confusing messages (Testa et al., 2013).

Research has further shown that, to be convincing an eco-label needs to be third party verified. Claims made by manufacturers or service providers don't really build trust at the consumer's side and such a label might fail (Anderson et al., 2013; D'Souza et al., 2007; Gallastegui, 2002). This may explain the finding of Testa et al. (2013) showing that most trust consumers had on the "official eco-labels" (EU eco-label and FCS label) (Testa et al., 2013).

Concerning the clarity of the process, researchers have suggested that procedures need to be adopted that the eco-label can only be used by those which have earned it and that it will be withdrawn immediately when the conditions are no longer fulfilled (Buckley, 2002), entry criteria for the eco-label need to be well-defined and transparent (Buckley, 2002) and real awards need to be given for environmental product improvements which requires also a constant revision of the environmental performance of all market players (Gallastegui, 2002). In addition the process requires adequate communication to diminish the information gap between buyer and seller. The main shortcomings in eco-label's process were found to be ambiguity about environmental themes, failure to assure the buyer about the product's ecological impact, the insufficient information about producer's compliance and the presence of recommendations. (van Amstel et al., 2008).

Third, the success of introducing an eco-label depends on customer group specific features. The success of an eco-label depends on the level of concern, understanding and awareness a consumer has about the eco-label itself in regard to the product certified (Anderson et al., 2013; Buckley, 2002). The research has also brought forth individual and group or country based variation in the willingness to adopt to new eco-labels. Factors that influence the consumer's adoption of a new eco-label scheme are: environmental factors (social norms, media, campaigns), personal factors (personality, demographics, relevant knowledge) and product related factors (certifying body, information on the product). The adoption process consists of six steps: exposure – perception – understanding – liking – adoption – continued adoption (Thogersen et al., 2010). When it comes to demographics, older consumers (50-60+ years) respond more likely to eco-labels however, they appear also most critical to the content and claim of such labels (D'Souza, 2007). From a geographical point of view consumers in the Nordic Countries, Germany and Japan but with growing interest also in the remaining European Countries and the USA are more responding to eco-labels, the reason is hereby also seen in the higher income (Houe and Grabot, 2009). It further depends on individual characteristics like values and motivation: whether and how quickly a consumer adopts to a new eco-label depends on his or her motivation, past experience with eco-labels as well as the trust set into the verifying organization (Thogersen et al., 2010). Consumers with no or weak interest in environmental issues would not response to any eco-label, consumers with an intermediate interest are very much avoiding a red labeled product while consumer with a strong interest in environmental issues are equally affected by negative and positive labels (Araghi et al., 2014; Grankvist et al., 2004). Thus the introduction of a new eco-label should be based on the identification of needs and goals of the consumers which is important in order to start the process of adopting to a new eco-label (Thogersen et al., 2010). This may lead to a situation in which a consumer has adopted to an eco-label when he or she is actively, repeatedly and consistently considering the label whenever a purchase decision is due (Thogersen et al., 2010).

Finally, research has suggested that the introduction of a new eco-label may be supported by benefits for companies. It has been suggested that eco-labels should motivate companies to improve their performance by bringing competitive advantage to those producers who use the

label while driving out the remaining producers from the market (Anderson et al., 2013; Berghoef et al., 2013; Grankvist et al., 2004; Buckley, 2002; Thogersen et al., 2002).

Concerning the cost influence of eco-labels prior research has brought forth contradictory views. On one hand, it has been suggested that eco-labels can also help traditional manufacturers (= full-service carriers) to position themselves better in the battle with low cost producers (= low-cost carriers) by gaining competitive advantage through environmental product differentiation (Anderson et al., 2013; Houe and Grabot, 2009) These views are, however, questioned by Delmas and Grant (2014), D'Souza et al. (2007) and Grankvist et al. (2004), who bring forth the possible negative impact on the product prices. Delmas and Grant (2014) compared eco-labelling with ecocertification and showed that eco-labelling had negative impact on product prices while ecocertification had provided price premium. In addition, as most of the consumers are rather price-sensitive, they might make a trade-off in their purchase decision not choosing the most expensive product (D'Souza et al., 2007) in which case consumers might not chose the product labeled green as it is too expensive however, they would certainly avoid a product which is labeled red (Grankvist et al., 2004).

AVIATION INDUSTRY SPECIFIC FEATURES FOR ECO-LABEL INTRODUCTION

Aviation as an industry has its specific features influencing possibilities for an eco-label introduction. Aviation is a rapidly growing industry, also characterized as being the most environmentally damaging form of transport per passenger-kilometer. It is thus rational for aviation businesses to cater the existing market in ways that generate maximum profit (Graham and Shaw, 2008). As discussed in the former chapter, prior research has shown that the success of an eco-label introduction is influenced primarily by how it is designed, the clarity of criteria and process, customer specific features and potential benefits for firms. Aviation industry specific features can be related on each of these factors.

Concerning the design of eco-labels it has been suggested that in order to use not only positive but also negative eco-labels (energy label) the labelling scheme cannot be voluntarily but needs to be enforced by a policy maker (Grankvist et al., 2004). This type of (energy) label for the aviation industry could make flights comparable. In addition to being comparable, the eco-label should not be overloaded with information. Thogersen et al. (2010) have shown that risks of eco-labels are that the consumer might feel an information overload or that they suspect "greenwashing" behind the green claim (Thogersen et al., 2010). Voluntary carbon offsets have been offered as an option for aviation eco-label. They, however, suffer of low degree of credibility, limited acceptance by air travelers and the fact that they do not neutralize emissions. (Gössling et al., 2009). Therefore, considerable share of air travelers may be even willing to avoid flights instead of compensating those.

The meaning of the term 'sustainability' is much debated and contested by different actor groups in the way what it might mean in terms of aviation (Walker and Cook, 2009). This sets requirements for the clarity of eco-label criteria and process. The researchers have suggested that first of all, there should be just one label on the market, otherwise many labels lead to confusion among customers. If there is more than one eco-label in a specific market this can lead to confusion and ignorance by the consumer (Bratt et al., 2011; Buckley, 2002; Gallastegui, 2002). In addition, an internationally competitive industry (like the aviation industry) needs a globally recognized eco-label (Buckley, 2002). In planning the process, the challenges of a capital intensive industry (like the aviation industry) needs to be taken into account when thinking about the validity period of the eco-label as changes (which require often vast investments) don't take place that quickly (Gallastegui, 2002).

Concerning the customer specific features it is notable that the amount of international air travelers is increasing: within the last 25 years it threefold and it is predicted that the rapid expansion continues similarly in the future (Walker and Cook, 2009). However, the research findings on air traveler's environmental attitudes and behavior are contradictory. Many air travelers differentiate between airlines based on their environmental friendliness and green image (Mayer et al., 2012). Although air traveler's positive attitudes towards environmental protection are identified (Davidson et al., 2014; Mayer et al., 2012; Gössling et al., 2009; Lu, 2009), research has shown similar attitude-action gap prevailing as in other environmental behavior (Davidson et al., 2014; Gössling et al., 2009; Lu, 2009). As a conclusion, the pressure experienced by airlines still seems to be rather low: airline representatives did not identify pressure from the customers as driving force for environmental protection - directly (Lynes and Dredge, 2006).

Finally, aviation eco-label's introduction may be supported by perceived benefits for airlines. It has been shown that in general eco-labels may increase demand for green products in this particular market even further (Anderson et al., 2013). Specifically as aviation related benefits Lynes and Dredge (2006) identified financial gains (meaning both the money saved and money earned) and maintaining the good relationships within aviation community as well as airline image building as motivations for airline environmental commitment. Lee and Park (2010) suggested that being more socially and environmentally responsible has a positive relationship with value performance in aviation industry, especially concerning that the financial market may consider firm value to have increased.

DATA AND METHOD

The data collection took place in two steps, first through informal interviews among participants at a professional conference and in a second step through standardized interviews with 12 aviation industry experts. This approach was chosen in order to first gather an understanding of this topic which so far hasn't received much attention in literature. The second reason was to build contacts with the industry in order to find suitable experts for in-depth interviews.

The idea about the introduction of an industry wide eco-label within the aviation industry was first discussed among the participants at the Air Transport World 5th annual Eco-Aviation Conference in Washington D.C. in June 2012. The participants were representing major US-American, European and Asian airlines, all major airframe makers and engine producers, international airports, airline trade associations as well as aviation industry service providers. The discussions took place during the breaks and while there was room for socializing. The discussions weren't structured and rather informal in a kind of focus group setting with 3-5 participants each. The participants were presented with samples of Flybe's and CheapTickets.nl's aviation eco-labels and were asked to comment on the idea and whether they think something similar could be introduced industry wide.

Based on the discussions at the conference the interview questions were developed. Standardized open-ended interviews with 12 aviation industry experts with relevant field knowledge (see table 1) took place during autumn 2012 and spring 2013. The interviewees represented major international and regional airlines, air traffic and airport authorities, global transaction processors, IT solutions providers, aviation management consultant companies, international business travel agencies, aviation fuel suppliers as well as facility maintenance and waste treatment service providers. The interviewees were selected according to the recommendation and contacts given by the conference participants. At the beginning of the interview all the interviewees were presented with the aviation eco-labelling scheme presented

by Flybe and the "eco value" scheme used by CheapTickets.nl. Based on the example provided to the interviewees the following issues were discussed: Do individuals/corporations consider the environment when booking a flight? How could flights be distinguished according to their environmental performance? Could an aviation eco-label have any impact on the booking decision of individuals/corporations? How could an industry wide aviation eco-label been realized? Most of the interviews were conducted face-to-face at the industry expert's workplaces however, two interviews were also conducted on the phone. The length of each interview varied between 40 minutes and 2 hours.

Table 1. Industry experts who participated in the interviews

Interviewee	Position	Field
Interviewee 1	Senior Sales Manager	Aviation fuels
Interviewee 2	Environmental Manager	Air traffic and airport authority
Interviewee 3	Senior Manager	Maintenance and waste treatment
Interviewee 4	Client director	Aviation management consultancy
Interviewee 5	Senior Manager	Aviation fuels / Biofuels
Interviewee 6	Environmental Manager	Major network carrier
Interviewee 7	CEO	Regional airline
Interviewee 8	Communication Manager	International business travel agency
Interviewee 9	VP Sustainable Development	Major network carrier
Interviewee 10	Managing Director	Global transaction processor
Interviewee 11	Group Environmental Officer	Global transaction processor
Interviewee 12	VP Environmental Issues	Major network carrier

To analyze the expert views on the introduction of industry wide eco-label, all 12 interviews were thematically analyzed. The analysis consisted of three rounds of summarizing, coding and synthesizing. In the first phase the content of interview was separately summarized based on the following three questions:

1. Do respondents consider the environment when booking a flight and in which way?
2. How could an eco-label build more awareness?
3. How could such an eco-label be realized in the industry?

This phase was completed by the first author of this paper. These questions for analysis were created based partly on the prior knowledge of the researcher and partly in interaction with the content of the data. The second phase was inductively implemented. Main themes related to introduction of new eco-label in aviation in the interviews were identified. This happened by identifying similarities and differences in the summaries written in the first phase. Certain similarities and differences were found and thus sections of summarizes were classified which emerged as crucial themes for eco-label introduction in the interviews. In this phase both the researchers went through the summaries. In the third phase the sub themes for each main theme were inductively identified. The content of each main theme was classified based on similarities and differences. The identified sub themes were listed and the list provided the basis for reporting the results.

RESULTS

In the opinion of the industry experts average air travelers seem not to care that much about environmental issues related to flying and many are also lacking of understanding of this issue. Nevertheless, the interviewees saw also that there are some air travelers who care about environmental impacts of flying and that their numbers are growing. Many were sure that this issue will gain more importance in the future. In order to enhance the understanding and to build more awareness among air travelers several industry experts demanded an easy to understand environmental indicator (e.g. eco-label) included into the booking process. That would make flights environmentally comparable and, if they want so, give air travelers the opportunity to actively choose the environmentally more preferable flights. Such an environmental indicator could also help corporations making their supply chain more sustainable by choosing only airlines that show a better environmental performance. In the long run this would also give those airlines a push which only followed the minimum legislation to become more active as they otherwise might be driven out of business, because they would not be considered anymore.

According to the industry experts environmental indicators are already used in corporate purchasing or reporting and many travel agents have been providing their corporate customers with carbon footprints or CO_2 figures of their flights. However, so far there is no industry standard existing and travel agents use various methodologies to calculate emissions. Even though the environmental indicators have mainly been used for reporting purposes, corporate customers have more and more been asking travel agents to provide them with environmental information about flights already at the stage of flight booking. The industry experts see a clear need to integrate environmental performance as a further dimension into the booking and decision making process. Companies would like to know the emissions before taking the flight and to have the chance to compare different flight options. Similar schemes are already in use at the corporate purchasing of cars.

All participants agreed that there is a difference between the environmental performance of airlines and that showing environmental responsibility can certainly improve an airline's corporate image. Nevertheless, the industry experts saw also that the environmental responsibility of airlines is nowadays still very difficult to communicate. It was also found that the general public has quite a wrong picture concerning the environmental impacts of flying and that environmental communication might easily be perceived as "greenwashing". Industry experts therefore saw a clear need to communicate the environmental responsibility of airlines with concrete figures. Hereby the message should be simple and for everyone easily to understand. It was seen as important that the message is integrated into the booking process so that the right information will be available at the right time when the booking decision is made. Nevertheless, the industry experts agreed that an industry standard is inevitable, otherwise if every airline creates their own measurements the whole discussion would lose credibility and air travelers wouldn't be able to compare different flight options with each other.

Regarding the design of an aviation eco-label most of the interviewees agreed that the information provided by the eco-labels presented in the example are sufficient enough. Some participants however, demanded more detailed information for those users who want to learn more about the methodology in order to ensure transparency and trustworthiness. Nevertheless, several participants also warned that making the information provided to complex could lead to a disinterest among the users. All experts agreed that the aviation eco-label should not be granted to a particular airline but should be flight specific. Which airline is the best choice on a particular route depends on many factors and might vary from route to route. The air traveler should be provided with information which airline and flight is the best on the particular route and day he

or she wants to travel. Regarding the environmental aspects that should been taken into consideration the industry experts had many suggestions. However, all agreed that at least the aircraft type and its configuration (engines, seat layout, cargo capacity, winglets/sharklets), the average load factor and the route (amount of stopovers, capacity of airports, local noise issues) should be considered. There was also a strong agreement to not only calculate CO_2 emissions but to take all greenhouse gases into account.

However, as much as the participants appreciated the idea of an industry wide environmental label the major concern all of them shared was whether and how there will ever be an agreement on the methodology for such a label. Certainly everybody agreed that there should be only one eco-label that covers all flights but this would also require an agreement by all parties involved, at least in case the eco-label is developed within the industry. Several participants mentioned the problems with the emissions calculator IATA tried to develop. As airlines were not able to agree on one common methodology, in the end every airline developed their own emissions calculator, because no industry wide agreement could be found. The only independent emissions calculator currently in use was developed by ICAO.

As already presented earlier in this study, until now only a few actors have come up with an aviation eco-label and some of those examples were presented and discussed during the interviews. Even though the industry experts saw certain value in them and appreciated the ideas there were also some major concerns. The main problem was seen in the fact that air travelers cannot compare apples with apples as long as every actor is doing their own label, using their own methodology. The other major concern was how trustworthy such a label might appear when it is released by e.g. an airline itself. Air travelers might suspect "greenwashing" behind such a label even though the methodology is well documented and openly accessible.

As it might be difficult to find common agreement between airlines and as it might not look very trustworthy when airlines are releasing their own eco-label several participants discussed the idea of whether to use travel agents to introduce an industry wide eco-label. As already mentioned earlier many travel agents have developed their own environmental indicators and have used them successfully for many years. The figures used there could easily been translated into an energy label which would classify flights into a scale from A to E. Another advantage is also that travel agents have easy access to relevant information needed to evaluate each flight individually such as aircraft type, cabin layout or load factors. Even though travel agents use currently various methodologies to calculate environmental impacts the industry experts didn't see a major problem in finding a common agreement among them.

Nevertheless, all industry experts agreed that the best solution to introduce an industry wide eco-label would be to go through an independent authority. Hereby different possible authorities were discussed but all participants agreed in the end that ICAO represents the most suitable authority. It has to be mentioned again that the only independent emissions calculator currently in use was developed by ICAO. The advantage of this approach is that problems with finding common agreement or the trustworthiness could hereby easily be overcome. The experts shared all the opinion that this approach would be the only one to gain an industry standard to which all players have to comply. Nevertheless, the scheme should not be voluntary and neither should it be forced through legislation. The independent authority (e.g. ICAO) would just provide the methodology for the eco-label, the market forces would take care of the rest. By providing the air traveler with the right information at the right time he or she could clearly choose those airlines which are going beyond compliance and forcing those airlines out of business which show no willingness to adapt.

DISCUSSION AND CONCLUSION

In this study the idea of introducing an eco-label into the aviation industry was discussed among 12 aviation industry experts. Hereby opportunities were presented such an eco-label could bring to the aviation industry. At the same time also challenges were discussed which such an introduction might face. The main focus of this study however, was on the design of the eco-label and the question how it should be introduce into the industry and by whom.

As previous studies found (Anderson et al., 2013; Gallastegui, 2002) the success of an eco-label depends first of all on the question whether there is a need for an eco-label in a particular industry or market. The industry experts certainly identified a need in the aviation industry for an environmental label. Not only is the environmental awareness among air travelers low and they lack of deeper understanding, the whole discussion seems to miss credibility and any environmental effort communicated by airlines is too easily be seen as "greenwashing". Besides that also the fact that more and more corporate customers are demanding environmental information about flights, already at the stage of booking, from their travel agencies is a clear indicator that there is a need for an aviation industry eco-label.

Further on, eco-labels are designed to support customers in their decision making process by compiling all environmental information relevant to each product, making all products taken into consideration environmentally comparable (Buckley, 2002; Gallastegui, 2002). Even though an air traveler would like to make a more environmental conscious booking decision, the question remains how he or she could gather all the relevant information in order to make various flight options environmentally comparable? The eco-label instead would have gathered all the relevant information for the air traveler. The right information would become available at the right time, namely during the booking process. This would give the air traveler the chance to compare different flight options not only according to their ticket prices, duration of the flights or amount of stopovers but also based on the environmental performance. The air traveler could consciously choose the "greener" option in case this is his or her intension. An eco-label could therefore help making the aviation industry more sustainable, not necessarily by forces of legislation but through a market driven approach.

Prior literature has shown that the success of introducing an eco-label depends also on the design of label, the clarity of process and criteria, customer specific features and perceived benefits for the manufacturer or service provider (Anderson et al., 2013; Buckley, 2002; Gallastegui, 2002). For each of these the aviation industry has its own specific features. Concerning the design of the aviation eco-label, the results suggest that the label should be a flight specific energy label based on a coloured scale ranging from A to E. The advantage of the colour scale is that it is easy understand as the meaning of the colours are known e.g. from traffic lights. Thus the danger of information overload which might lead to ignorance or the suspicion of "greenwashing" (Thogersen et al., 2010) could be avoided.

Concerning the clarity of criteria and process the research results reassert the suggestion that there should be only one eco-label in the aviation industry (Bratt et al., 2011; Buckley, 2002; Gallastegui, 2002). Otherwise there is a danger that many labels would lead to confusion among air travelers. However, related to the clarity and the process the study also emphasized the importance of selecting the right actor to introduce the label. According to the experts this actor should be ICAO due to its independent position in the market. Experts asserted that airlines are competing too much as if they would ever be able to agree on a common methodology. The failure of coming up with an industry wide standardized emissions calculator is just one example. Therefore it might seem difficult to find an industry agreement on the methodology for the eco-label. This also clearly indicates that an independent authority has to come up with the

methodology as it should not be developed within the industry. The ICAO as an UN body was here named as the right party. Concerning the customer specific features the study supported the prior findings of split views of air traveller's environmental attitudes and behaviour (Davidson et al., 2014; Gössling et al., 2009; Lu, 2009). The experts brought forth both the views of low environmental awareness and high environmental awareness, but also stressed that the awareness is increasing.

Finally, consistent with prior findings the results suggest that some airlines may benefit from the introduction of the eco-label. Prior research has brought forth financial gains, maintaining the good relationships within the aviation community and better company image as possible benefits of an eco-label implementation (Lynes and Dredge, 2006; Lee and Park, 2010). However, the results added also the perspective of increased competitive advantage this eco-label might bring to those forerunning airlines which can use the label as an instrument to differentiate their product from their competitors as more environmentally friendly (Grankvist et al., 2004).

The most important practical contributions of the study are related to the possible benefits for the companies. Communicating environmental responsibility is currently rather difficult for airlines as it easily might be perceived as "greenwashing" by air travelers. An independent eco-label that rates the environmental performance could make the message more trustworthy. This could also bring competitive advantage to those airlines which have a better environmental performance as these issues is starting to gain more importance in air traveler's mind. Once aware air travelers might not anymore choose flights only according to price but also based on the information provided by the eco-label. In the long run this would also push the lowest rated airlines to increase their environmental performance, as they otherwise might be driven out of the market (Grankvist et al., 2004). However, finding an industry wide agreement on the design of the eco-label might be difficult as competition between airlines is tough. Nevertheless, it is essential to come up with one eco-label that covers all flights otherwise the air traveler won't be able to compare apples with apples. Using travel agents to roll out an eco-label was seen as one solution. They have already many years of experience by rating flights through environmental indicators and providing this information to, mainly, corporate customers. The best solution however, was seen in using an independent authority such as ICAO who would provide the framework of the eco-label scheme, ensuring that all flights are rated the same way in order to make them environmentally comparable.

As this study reached out to discuss a complete new idea, namely the introduction of eco-labels into the aviation industry, it has also thrown up many new questions in need for further investigation. What remained open first of all is the question how well air travellers would adopt to an aviation eco-label and how strongly it would influence their booking decision? Further on there is also the question whether an eco-label would increase the willingness to pay more among air travellers for "greener" flights and how much more they would be ready to pay? Finally the question remained open whether introducing an eco-label into the aviation industry could really bring competitive advantage to those airlines which are showing a better environmental performance.

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