IJMCNM

Research Paper

Role of Culture and Social Norms: Consequences for Communication Fostering the Intentions towards Sustainable Air Travel

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ABSTRACT

Despite the growing body of research on sustainable consumer behaviour, empirical studies simultaneously linking cultural values, social norms and persuasive mechanisms in the context of leisure air transportation remain scarce. Existing research has largely focused on general tourism behaviour or everyday sustainable consumption, leaving the role of social influence and communication processes in aviation underexplored. This study investigates the influence of cultural dimensions—long-term orientation and collectivism—on environmentally responsible behaviour in leisure air travel, with particular attention to social norms as a central mechanism of social influence within the Theory of Planned Behaviour (TPB). Data were collected through a structured questionnaire administered to respondents in the Czech Republic and Spain, combining validated TPB constructs with measures of cultural dimensions, and analysed using Structural Equation Modelling to test the proposed relationships. The results show that collectivism exerts an indirect effect on behavioural intentions through subjective norms, which emerge as the strongest predictors of intention. In contrast, long-term orientation does not display a significant direct or indirect effect, and perceived behavioural control proves to be non-salient in this context. Overall, respondents exhibit low intentions and limited behavioural change regarding environmentally responsible air travel. The originality of this study lies in extending the TPB framework by integrating cultural values into the analysis of behavioural intentions and self-reported behaviours in leisure aviation from a cross-cultural perspective. From a practical standpoint, the findings suggest that individual-level appeals may be insufficient to promote behavioural change in leisure air travel, indicating that interventions aimed at shifting societal norms through policy, media and community-based initiatives may be more effective. Accordingly, airlines and tourism stakeholders are encouraged to adopt strategies that emphasise group identity and shared responsibility, such as promoting carbon offset schemes and sustainability commitments. The study is limited by its focus on two European countries, the use of a non-random sample and unvalidated behavioural measures, which constrain the generalisability of the results.

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1. INTRODUCTION

The global population reached 7.8 billion people in 2019 (UN, 2022), 58% of whom used air transport. In 2019, approximately 4.5 billion people travelled by air to their destinations (ATAG, 2022). As air travel continued to grow leading up to 2019, several organisations began proposing regulations and policies to reduce greenhouse gas emissions from aircraft. The same situation in air travel returned in 2023 after the pandemic years (2020-2021), when the number of accounted passengers was again approximately 4.5 billion (IATA, 2024;Statista, 2024).

The distribution of greenhouse gas emissions showed transportation as the second biggest contributor. Considered leisure travel, air transportation (IEA, 2023) is one of the two main polluters. Lenzen et al. (2018) estimate that tourism creates around 8% of greenhouse gas emissions. The author identifies three challenges in reducing emissions: (1) preferring economic results, (2) interest on the demand side, and (3) lack of formal cooperation and organisation at the national and international level, given by the very nature and complexity of the tourism sector.

This paper will approach the issue from the customer perspective and adopt an explanatory approach. Understanding the customer´s opinions and approach is crucial. Companies and institutions can react to this and choose the right communication to motivate the customers to a behavioural change, initiate intentions, and cultivate their attitude. A common approach to analysing and explaining the behaviour is using two main theories – the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB) (e.g., Poudel and Nyaupane, 2016). Both emphasise the importance of attitude for intentions, however, the actual behaviour is often different.

There are many pieces of research focusing on green, bio, and ecological consumption in the context of buying products, there is a significant research body focusing on tourism, and on ecological or responsible behaviour. There is a research gap in the description of behaviour in air travel. This research aims to fill the gap, bringing new insight into the environmentally responsible

behaviour and its aspects in air travel. Air transportation is a significant air polluter in tourism. However, this mode of transport is difficult to substitute, especially for longer distances. This research focuses on air transportation in leisure travel and the factors affecting tourists´ attitudes, intentions, and behaviour.

This paper aims to identify and examine the impact of cultural dimensions of long-term orientation and collectivism on attitudes to air travel and intentions, by applying constructs from TPB. A conceptual model is developed, and the moderating variables are suggested based on the literature review. The effects of the factors are estimated with SEM.

The paper is structured as follows: the next section presents the theoretical foundations for the hypothesis, the next section describes the method, and the results emerging from the study. The last parts focus on discussion and depicts the concluding remarks and implications.

2. LITERATURE REVIEW

Travellers are aware of the environmental issues connected with their travel; the younger generation is even more conscious about these concerns. In the last century, the negative impacts of tourism garnered attention (Fennell and Malloy, 1995). However, at the beginning of the 21st century, the negative influence became an important topic. Overtourism, littering, cultural conflicts, pollution, etc., appeared in the centre of researchers' attention. Similar to ecological behaviour in general, the tourism surveys and research confirm the paradox of customers behaving in contradiction with their beliefs (Anciaux, 2019; Carrigan and Attalla, 2001; Bergin-Seers and Mair, 2009). However, the current research reveals that there are already tourists who are aware of their environmental footprint and are willing to change their behaviour or behave responsibly (Hergesell, 2017). Georgescu and Herman (2020) bring the idea that even ecologically responsible people forget about their responsibility during their holidays, and that it is necessary to remind them and give them the impulse to stay ecological. On the other hand, some researchers found that tourists perceive their vacation as a basic right and are not willing to limit and control themselves (Miller at al., 2010), and the most ecologically conscious tend to change their behaviour during the vacation (Juvan, and Dolnicar, 2014).

Sustainability on air travel arise as an thought-provoking topic. The initiative and communication originate often from the airlines. Their aim is usually to create relation, trust, and loyalty. The

positive effect of sustainable actions and their communication is confirmed by Galhoz et al. (2024). The environmental communication is not only a tool for reputation management but it can have a positive impact on customer behaviour. The travellers prefer and demonstrate intentions towards buying from green airlines (Avirutha, 2025). The study suggests that the solely existence of the sustainable initiatives is not sufficient and emphasises the crucial role of marketing communication. Yavas and Dedeoglu (2024) on the other hand present ambiguous results. The Turkish travelers express concerns about environmental impact but these are not reflected in their behaviour. The environmental attitudes are more significant for younger and better educated consumers. The sustainability communication can increase positive value perception and differentiate the company from competitors. The communication should be targeted to the right segment and differentiated, it is necessary to emphases the environmental benefits (Patino-Artaza and Suau-Sanchez, 2025). The style and content of communication of the environmental impacts and initiatives are key for communication efficiency (Núñez and Chankov, 2022). The communication is crucial also in context of "flightshame" that influences the whole communities and originates from Sweden, expanding to the rest of the world (Becken, 2021).

The dimensions defined by Hofstede (2003) are one of the most important concepts in cultural typology. Hofstede defines five dimensions: Power Distance Index, Individualism, Masculinity, Uncertainty Avoidance Index, and Long-Term Orientation. The research confirms that cultural dimensions, as conceptualised by Hofstede, significantly influence sustainable consumption behaviours across different societies. Specifically, long-term orientation (LTO) and collectivism (COL) are values from Hofstede´s dimensions proven to have an impact on ecological behaviour. Nations and persons with long-term orientation have an active and positive attitude towards ecological products as they consider the benefits for the future (Leonidou et al., 2010). Several authors confirmed that long-term oriented people have a positive attitude towards the environment and green products (Joreiman et al., 2004; Sarigöllü, 2009). Research revealed that LTO positively influences Indian consumers' intentions to purchase electric two-wheelers, highlighting the role of future-oriented cultural values in promoting sustainable behaviours (Ray and Sahney, 2021). Other research identified a significant effect of LTO and COLL on intention (Sreen et al., 2018). Based on the literature we hypothesis that:

H1a: LTO has a positive effect on attitude to responsible behaviour in air travel.

H1b: LTO has a positive effect on intention to behave responsibly in air travel

Collectivism, another of Hofstede's dimensions, emphasises group goals and interdependence, influencing individuals to consider the impact of their actions on the community. Research indicates that collectivist cultures are more inclined toward pro-environmental behaviours. Collectivism positively affects green purchase intentions, as individuals in such cultures prioritise community well-being. Sreen et al. (2018) revealed a direct effect of collectivism on attitude, subjective norms, and behavioural control. Collectivism moderates the relationship between environmental attitudes and green purchase intentions in Korea and China, suggesting that collectivist values enhance the effect of environmental consciousness on sustainable consumption (Lee, 2009; Lee, 2017). Based on the literature on general behaviour there is a reasonable expectation that sustainable green transportation will be effected by this dimension as well. Therefore, we formulate the following hypotheses:

H2a: COL has a positive effect on attitude to responsible behaviour in air travel

H2b: COL has a positive effect on subjective norms and increases their influence

H2c: COL has a positive effect on intention to behave responsibly in air travel

Other cultural dimensions, such as uncertainty avoidance and power distance, also play roles in shaping sustainable behaviours. Comparing green product preferences in Malaysia and Indonesia reveals that uncertainty avoidance and LTO significantly influence consumer choices in both countries. However, power distance had a varying impact, affecting Malaysian consumers but not Indonesian ones (Ghazali et al., 2021). These findings underscore the complexity of cultural influences on sustainable consumption, highlighting the need for culturally tailored strategies to promote environmental responsibility.

The research on air travel about cultural dimensions is missing, and most research confirms the effect of LTO and collectivism. Therefore, authors analyse LTO and COL as the dominant cultural factors affecting the responsible consumption.

However, this research goes beyond the intentions and asks respondents also about their behaviour. The most powerful impact on the environment would be avoiding flying. However, the behaviour was described on several levels of impact to see the variance: (1) avoiding flying represented by the statements "I don´t use the air transportation" and "I don´t go to long haul holidays for ecology reasons", (2) trying to find alternatives represented by the statement "For distances under 400 km, I chose a more ecological option" and (3) trying to limit and compensate the ecological footprint thanks to money represented by the statements "I pay more for a direct flight, if available" and "I

am willing to pay the CO2 compensation fee". The authors suggested these statements without validation by previous research. The items will undergo the standard reliability check. To see how the factors effect the behaviour, the following hypotheses were created:

H3a: The LTO has a positive effect on responsible behaviour in air travel

H3b: The COL has a positive effect on responsible behaviour in air travel

The models TRA and TPB are the most used for analysing consumer behaviour. This paper aims to explain the effects of several variables on attitude, intention, and behaviour. As transportation is a very specific situation, the PBC is supposed to play a significant role (Ajzen, 1991;Kaiser, 1998;Kaiser and Gutscher, 2003).

3. METHODOLOGY

This paper aims to examine the impact of cultural dimensions on attitude to air travel, intentions, and real behaviour by applying constructs from TPB. The conceptual model is developed, and the moderating variables are suggested based on the literature review. The effects of the factors are estimated with SEM.

The researchers developed a self-designed questionnaire with statements verified with previous research and with their own statements and used the Likert scale 1- 5 to evaluate the statements by the respondents. Structural equation modelling (SEM) is used to analyse the data and find the most significant variables influencing the intentions and real behaviour in air transportation during leisure travel. The research design is based on an extensive literature review. The constructs are formulated based on the validated research (Sreen at al., 2018; Hergesell, 2017) and complemented by their statements regarding air transportation.

The first part of the questionnaire is dedicated to the current behaviour in transportation to avoid autocorrelations concerning the following questions about the environment. The second part is devoted to questions covering the TPB model. The third part is focused on Hofstede´s cultural dimensions. The last part asks about sociodemographic characteristics, including gender.

Data were collected in European countries, in the Czech Republic and Spain, to obtain higher variability in opinions (coming from different cultural backgrounds), and give a picture of the European traveller. The data were collected as part of a long-term research focused on transportation modes and sustainability. Data were collected online with MS Forms and offline. The sample structure is presented in Tables 1 - 3.

Table 1. Sample structure – Gender / Age

Gender / Age	Number	Percentage	Gender / Age	Number	Percentage
Man	127	46,4%	Woman	147	53,6%
15 - 24	11	4,0%	15 - 24	29	10,6%
25 - 34	24	8,8%	25 - 34	43	15,7%
35 - 44	30	10,9%	35 - 44	17	6,2%
45 - 54	23	8,4%	45 - 54	27	9,9%
55 - 64	24	8,8%	55 - 64	19	6,9%
65 and more	15	5,5%	65 and more	12	4,4%
			Total	274	100%

Source. Own Elaboration

Table 2. Sample structure – Income and education

Income	Number	Percentage	Education	Number	Percentage
Under average	41	15,0%	Elementary	17	6,2%
Average	163	59,5%	High school	69	25,2%
Above average	59	21,5%	Higher education	41	15,0%
High above average	11	4,0%	College / uni	147	53,6%
Total	274	100,0%	Total	274	100,0%

Source. Own Elaboration

The socio-demographic structure of the sample of respondents is balanced except for education. More respondents with university and college education are included in the sample, which might shift the results a bit more towards responsible behaviour in comparison to the general population. On the other hand, more educated people also travel more, which can compensate for this deflection.

4. RESULTS AND DISCUSSION

After the check of incompleteness and unusual data, the creation of the model is the second step. In this stage, the confirmatory factor analysis of the main components of the model is performed. First, the means of the individual variables, standard deviation, loading factors before adjustments, and Cronbach's Alpha for attitude, subjective norms, perceived control, intention, behaviour and analysed factors – collectivism and long-term orientation are calculated.

Several items were left out to create relevant factors. After the control of Cronbach's Alpha, AVE, and factor loadings and the relevant adjustments, the reliability of the factors was satisfactory. The final Cronbach's Alpha, AVE and composite reliability are shown in Table 3. The lowest value of Cronbach's Alpha is for the behaviour, where the statements have not been validated before by

previous research. The other factors are above 0.625. All factors reached AVE above 0.5, and composite reliability is above 0.8.

Table 3. Factor means and reliability statistics after reduction

	Mean	Cronbach's Alpha	AVE	CR
Attitude	3.700	.799	.503	.858
Subjective norms	2.984	.790	.550	.859
Perceived control	3.093	.689	.620	.829
Intention	2.583	.755	.671	.859
Behaviour	1.943	.613	.733	.846
Long-term orientation	3.564	.633	.731	.845
Collectivism	4.166	.672	.512	.807

Source. Own Elaboration

Correlation matrix confirmed the relations between the variables. As supposed, the analysis revealed a high and significant correlation between attitude and intention (0.602, p<0.01). More surprising is a strong correlation between subjective norms and attitude (0.614, p<0.01). This relationship will be added into the model to test the possibility that subjective norms affect the intention indirectly. For the same reason, the effect of subjective norms on environmentally friendly behaviour will be tested. The correlations are presented in Table 4.

Table 4. Correlation matrix

	ATT	SN	PBC	INT	BE	COL	LTO
ATT	1						
SN	,614**	1					
PBC	,218**	,330**	1				
INT	,602**	,524**	,190**	1			
BE	,183**	,219**	0,016	,500**	1		
COL	,235**	,256**	,170**	,145*	-0,003	1	
LTO	,174**	,134*	0,091	,180**	0,007	,261**	1

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

Source. Own Elaboration

The research aimed to examine the effect of culture, namely long-term orientation and collectivism, on the responsible behaviour in air travel. The SPSS Amos was used to estimate the model and to describe the main components of the model and their relations.
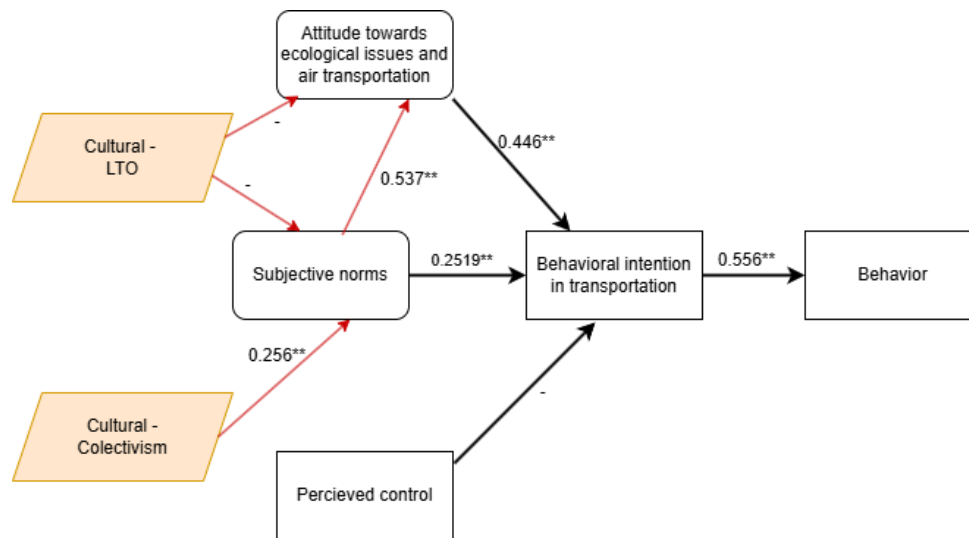
Figure 1. Results of the structural modelling
Source. Own calculations

The estimated model shows the importance of attitudes and subjective norms. Black arrows describe the original model of the TPB. We can see that the perceived behavioural control does not play any role in the behavioural model describing the situational concept of leisure air travel, this is contrary to most of the research mentioned in the literature review. On the other hand, the crucial role of subjective norms is evident.

The effect of LTO on intentions and attitude is not significant, and we can reject the hypothesis that long-term orientation affects attitude or intentions toward responsible behaviour in air transportation. There is no direct or indirect evidence of an effect. The authors derive that this is caused by the specific context of leisure air travel, which has an extraordinary position in long-haul holidays which are perceived as part of social status, reward for hard work and modern life style. This is in line with the reseach on general tourists´ behaviour (Juvan, and Dolnicar, 2014; Miller at al., 2010, UN Tourism, n.d.).

The model supports the hypothesis H2b that collectivism positively affects the subjective norms (standardised direct effect 0.256), but there is no direct effect on attitude (H2a) or intention (H2c). However, the path COL – SN – ATT/INT is significant, and the standardised indirect effect on attitude is 0.150 and on intention 0.169.

The direct effect of the factors on behaviour was hypothesised; however, the correlation matrix indicated that the effect would be zero or close to zero. This was also confirmed with the model in AMOS.

The research deeply analysed the variables and components of the TPB model. It brought interesting insights into thinking of air transportation users, and factors that influence them and motivate them to reduce or avoid flying. However, this tendency is rarely present and only to a limited extent. In most research on ethical behaviour, the authors describe that consumers have concerns about the environment and show intentions to behave responsibly, but do not transform their intentions into deeds. The intention to behave responsibly and reduce or avoid flying is not reported in this research.

Unlike other research, the results report a low impact of cultural dimensions – collectivism and long-term orientation.

6. CONCLUSION AND IMPLICATIONS

The paper confirms the findings from general research on tourists´ behaviour (Anciaux, 2019) as well as results from specific studies (Yavas and Dedeoglu, 2024). The paper brings originality by applying specific cultural dimensions (LTO and COL) to environmental behavior in recreational air travel, a context that is still little explored. The main innovation in the empirical application and counterintuitive results, namely the absence of a direct effect of LTO. Thinking of the managerial and practical implications, the research confirmed the desire to fly for holidays; respondents do not state any intention to reduce or avoid flying for leisure purposes. It brings implications for managers and companies, as well as for different non-commercial initiatives like associations, NGOs and research institutions.

Firstly, the study brings important information for managers and companies that want to reflect the environmental impacts in their business. The significance of collectivism and impact of social norms is an important finding, it can help the air transportation companies with customisation of arguments used in marketing communication in terms of ethics, responsibility and sustainability, offer valuable articles and news to the website visitors and customise the offer of products (direct flights, CO2 compensation fee, use sustainability as selling arguments, etc.). Communication of ecological effort and activities could help keep the customer loyal and create a better image in the future, as travellers are not willing to give up air travel.

Secondly, the most important implication for associations, NGOs and research institutions is that they must search for reducing the environmental impact of air transportation in other sources – effective journey planning, efficiency of the engines, less polluting fuel, etc. The education of

travellers can help to a limited extent. On the other hand, subjective norms play a significant role and might be the future way of changing the perception of flying in society. This shift can be seen already in some countries, e.g. Sweden (Ullström et al., 2021). The way towards reducing flying is to change the social norms and perception of what is "normal". Therefore, it is crucial to communicate with the whole community and society, not to rely on the individual approach of customers and benefits offer.

The limitations of the research are the methods of data collection. The collection proceeded in two European countries, trying to reach a representative sample of respondents, however, the sampling was not structured, so it is not possible to generalise the results. Also, most of the answers were collected online, which excludes some segments. As most research ends with intentions, previous research did not validate the statements about behaviour. The data were collected in two countries – the Czech Republic and Spain. Inclusion of "richer" countries (Switzerland, Germany, Belgium, etc.) could shift the results.

As a specific situation, leisure travel was chosen thanks to the performance of free will. In the future, other travel purposes could be part of new research, mainly business travel at the level of companies and their CSR strategy. Also, some aspects were found that deserve deeper insight, like the perception of the CO2 compensation fee and its role in responsible and ethical consumption. It would be also beneficial to further research the effect of communication style, personalisation vs. community appeals for responsible behaviour, etc.

The contribution of the research is both academic and practical. Revealing factors influencing the intentions and real behaviour can contribute to the current state of knowledge by filling the gap and can also help practitioners in preparing their communication and promotions to support ecological consumption. The research confirmed the impact of subjective norms and attitudes as the most important factors for behavioural intentions. These findings bring a new piece of knowledge into the question of efficient sustainability communication.

REFERENCES

Ajzen, I. (1991)," The *theory of planned behavior*", Organizational Behavior and Human Decision Processes, Vol. 50 No. 2, pp. 179-211.

Anciaux, A. (2019)," On *holidays, I forget everything… even my ecological footprint: Sustainable tourism through daily practices or compartmentalisation as a keyword?* ", Sustainability, Vol. 11 No. 17, pp. 4731.

ATAG-Air Transport Action Group (2022), "*Facts and Figures",* Retrieved March 07, 2022, from: https://www.atag.org/facts-figures.html

Avirutha, A., Sittisook, B. (2025). Consumer Awareness of Green Aviation and Its Influence on Airline Choice Behavior. *Ramkhamhaeng International Journal of Science and Technology.* 8(2), pp. 23-31

Becken, S., Friedl, H., Stantic, B., Connolly, R. M., & Chen, J. (2021). Climate crisis and flying: Social media analysis traces the rise of "flightshame". *Journal of Sustainable Tourism*, 29(9), 1450–1469. https://doi.org/10.1080/09669582.2020.1851699

Bergin-Seers, S. and Mair, J. (2009), *"Emerging green tourists in Australia: Their behaviours and attitudes"*, Tourism and Hospitality Research, Vol. 9 No. 2, pp. 109-119.

Carrigan, M. and Attalla, A. (2001), "*The myth of the ethical consumer – Do ethics matter in purchase behaviour?"* Journal of Consumer Marketing, Vol. 18 No. 7, pp. 560-577.

Fennell, D. and Malloy, D. C. (1995), "*Ethics and ecotourism: A comprehensive ethical model",* Journal of Applied Recreation Research, Vol. 20 No. 3, pp. 63-183.

Galhoz, I., Ramos, R. F., & Biscaia, R. (2024). Airline environmental sustainability actions and CSR impact on customer behavior. *Research in Transportation Business & Management*, *53*, 101111. https://doi.org/10.1016/j.rtbm.2024.101111

Georgescu, M., and Herman, E. (2020), "*Are young people ready to have a proenvironmental sustainable behaviour as tourists? an investigation of towel reuse intention",* Sustainability, Vol. 12 No. 22, pp. 9469. http://dx.doi.org/10.3390/su12229469

Ghazali, I., Abdul-Rashid, S. H., Dawal, S. Z. M., Aoyama, H., Sakundarini, N., Ho, F. H.,and Herawan, S. G. (2021). Green product preferences considering cultural influences: A comparison study between Malaysia and Indonesia. *Management of Environmental Quality: An International Journal*, 32(5), 1040–1063. https://doi.org/10.1108/MEQ-11-2020-0245

Hergesell, A. (2017), "*Environmental commitment in holiday transport mode choice",* International Journal of Culture, Tourism and Hospitality Research, Vol. 11 No. 1, pp. 67- 80.

Hofstede, G. (2003). Culture´s Consequences: Comparing Values, Behaviours, Institutions and Organizations across Nations. *Sage Publications*. ISBN 9780803973244

IATA (2024). *Annual Review 2024.* Available from: https://www.iata.org/en/search/?search=annual+review+2024

IEA. (2023), "*Distribution of carbon dioxide emissions produced by the transportation sector worldwide in 2022, by sub sector",* Statista. Statista Inc.. Retrieved on June 24, 2024. https://www-statista-com.zdroje.vse.cz/statistics/1185535/transport-carbon-dioxide-emissions-breakdown/

Joireman, A.J., Van Lange, M.A.P. and Van Vugt, M.(2004*)."Who Cares about the Environmental Impact of Cars?: Those with an Eye toward the Future¨.* Environment and Behavior. Vol.36, No. 2. https://doi.org/10.1177/0013916503251476

Juvan, E., and Dolnicar, S. (2014), "*The attitude-behaviour gap in sustainable tourism",* Annals of Tourism Research, Vol. 48, pp. 76-95. http://doi.org/10.1016/j.annals.2014.05.012

Kaiser, F.G. (1998), "*A General Measure of Ecological Behavior",* Journal of Applied Social Psychology, Vol. 28 No. 5, pp. 395-422.

Kaiser, F.G. and Gutscher, H. (2003), "*The Proposition of a General Version of the Theory of Planned Behavior: Predicting Ecological Behavior",* Journal of Applied Social Psychology. Doi: 33. 10.1111/j.1559-1816.2003.tb01914.x

Lee, K. (2009), "*Gender differences in Hong Kong adolescent consumers' green purchasing behavior",* Journal of Consumer Marketing. Vol. 26 No. 2, pp. 87 –96.

Lee, Y. K. (2017). A Comparative Study of Green Purchase Intention between Korean and Chinese Consumers: The Moderating Role of Collectivism. *Sustainability*, *9*(10), Article 10. https://doi.org/10.3390/su9101930

Lenzen, M., Sun, Y., Faturay, F., Ting, Z., Geschke, A., and Malik, A. (2018), "*The Carbon Footprint of Global Tourism",* Retrieved December 01, 2021, from: www.researchgate.net/publication/324992370_The_carbon_footprint_of_global_tourism

Leonidou, C.L., Leonidou, N.C. and Kvasova, O.(2010)Antecedents and Outcomes of Consumers Environmentally-Friendly Attitudes and Behaviour. *Journal of Marketing Management*, Vol. 26, No.13, pp. 1319-1344. DOI: 10.1080/0267257X.2010.523710

Miller, Graham and Rathouse, Kathryn and Scarles, Caroline and Holmes, Kirsten and Tribe, John. (2010), "*Public understanding of sustainable tourism",* Annals of Tourism Research. Vol. 37, pp. 627-645.

Núñez Alfaro, V., & Chankov, S. (2022). The perceived value of environmental sustainability for consumers in the air travel industry: A choice-based conjoint analysis. *Journal of Cleaner Production*, 380, 134936. https://doi.org/10.1016/j.jclepro.2022.134936

Patino-Artaza, H., & Suau-Sanchez, P. (2025). *What drives passengers towards sustainable aviation?* A segmentation study of travel behaviour and environmental concern in Spain. Case Studies on Transport Policy, 21, 101539. https://doi.org/10.1016/j.cstp.2025.101539

Poudel, S. and Nyaupane, G. P. (2016), "*Understanding Tourist Environmental Behavior An Application of the Theories on Reasoned Action Approach",* Travel and Tourism Research Association: Advancing Tourism Research Globally. Vol. 20. Retrieved March 07, 2022, from htts://scholarworks.umass.edu/tta/2012/Oral/20

Ray, S. K., and Sahney, S. (2021). Personal cultural orientation and green purchase intention: A case of electric two-wheelers in India. *Journal of Asia Business Studies*, *16*(5), 729–746. https://doi.org/10.1108/JABS-06-2020-0220

Sarigöllü, E. (2009) *"A Cross Country Exploration of Environmental Attitudes".* Environment and Behavior, Vol.41, No. 3, pp.365-386. DOI: 10.1177/0013916507313920

Sreen, N., Purbey, S., and Sadarangani, P. (2018), "*Impact of culture, behavior and gender on green purchase intention*". Journal of Retailing and Consumer Services, Vol. 41, pp. 177–189. doi.org/10.1016/j.jretconser.2017.12.002

Statista (2024). Global air traffic- scheduled passengers 2004-2024. *Statista Research Department*. Available from: https://www.statista.com/statistics/564717/airline-industry-passenger-traffic-globally/

Ullström, S., Stripple, J., and Nicholas, K. A. (2021)," *From aspirational luxury to hypermobility to staying on the ground: changing discourses of holiday air travel in* Sweden", Journal of Sustainable Tourism, Vol. 31 No. 3, pp. 688–705. https://doi.org/10.1080/09669582.2021.1998079

UN Tourism World Tourism Barometer | Global Tourism Statistics. (n.d.). Retrieved 22 January 2026, from https://www.untourism.int/un-tourism-world-tourism-barometer-data

UN United Nations (2022). *World Population Prospects 2022*. United Nations, New York. eISBN:9789210014380

Yavas, V., & Ozhan Dedeoglu, A. (2024). Beyond satisfaction: How environmental attitudes shapes customer preferences for Turkish domestic air passengers. *Research in Transportation Business & Management*, *57*, 101203. https://doi.org/10.1016/j.rtbm.2024.101203

How to cite this article: