Received: 25 April 2023 | Revised: 24 May 2024 | Accepted: 9 July 2024

DOI: 10.1002/jtr.2691

RESEARCH ARTICLE

WILEY

Self-interest, ethical and environmental considerations of air traveler weight policies

Denis Tolkach[1] | Stephen Pratt[2] | Lorenzo Masiero[3] | Matias Thuen Jørgensen[4] | Judit Zoltan[3] | Markus Schuckert[5] | Kaye Chon[6]

[1]College of Business, Law and Governance, James Cook University, Cairns, Queensland, Australia

[2]Rosen College of Hospitality Management, University of Central Florida, Orlando, Florida, USA

[3]Department of Economics, University of Bologna, Rimini, Italy

[4]Department of Social Sciences and Business, Roskilde University, Roskilde, Denmark

[5]Peter T. Paul College of Business and Economics, University of New Hampshire, Durham, New Hampshire, USA

[6]School of Hotel and Tourism Management, The Hong Kong Polytechnic University, Hong Kong SAR, People's Republic of China

Correspondence
Denis Tolkach, James Cook University, Cairns, QLD, Australia.
Email: denis.tolkach@jcu.edu.au

Funding information
Hong Kong Polytechnic University (ZJLU)

Abstract

There is ongoing debate about whether airlines should charge passengers based on their weight. This study examines the ethics of three policies by surveying 1012 US air travelers: A Standard policy with a uniform price irrespective of the weight. A Threshold policy with a penalty if the body weight exceeds 160 pounds (72.6 kg). And a Unit-of-Body-Weight policy with an individual price based on body and baggage weight. The study demonstrates levels of acceptance of these policies by different segments of passengers across various normative ethical theories. Younger generations were more accepting of alternatives to the current standard policy. Self-interest was evident as a major influence of respondents' views. The core of the theoretical contribution highlights the importance of a differentiated view on, and separation of ethical and environmental issues in tourism research, as it shows, that the more environmentally sustainable choice may not be the more ethical one.

KEYWORDS
air travel, baggage, carbon emissions, environmental sustainability, ethics, self-interest

1 | INTRODUCTION

Aviation's contribution to anthropogenic climate change is considerable— around 5%—due to a range of carbon and non-carbon pollutants (Grewe et al., 2021). While other sectors of the economy have been successful at decarbonizing, similar measures in the airline industry are only realistic in the long-term (IATA, 2021). In the short term, solutions are needed to make flying more efficient and limit fuel consumption. Aircraft fuel consumption is directly linked to the total weight and distribution of the payload (i.e., passengers, baggage, and cargo weight combined [Ackert, 2018]). Therefore, the ability to reduce the payload or to better predict and hence distribute it decreases an aircraft's fuel consumption, thus reducing the CO_2 emissions caused by aviation (Spinks, 2017).

Baggage policies currently work to limit the carry-on and check-in baggage that travelers take with them, but these could also act to decrease the total weight that passengers bring on board the flight. This reduction could be carried out, as suggested by Bhatta (2013), by policies that charge for the combined weight of a passenger and their luggage. Such policies can be considered fairer, simpler, more cost efficient, and better for the environment (Bhatta, 2013). However, pay-per-weight policies have been considered controversial, as demanding higher fees of overweight passengers may be seen as unfair and discriminatory (Marcus, 2020; Mufti, 2019; Visontay, 2023). For example, Canada has adopted a One-Passenger-One-Fare Policy, which demands additional seating is provided to persons with disabilities (including being functionally disabled by obesity) free of charge to ensure accessibility of air travel (Canadian

Transportation Agency, 2019). The policy applies to domestic flights only, and there is an ongoing policy confusion internationally as countries approach the issue of charging for an extra seat differently (Hardingham-Gill, 2023). Moreover, even intermittent and optional weighing of passengers to ensure correct estimation of payload on flights creates backlash and controversies (Clatworthy, 2024; Garcia, 2024).

As such, these policies raise multiple ethical concerns: Is it ethical that every traveler pays the same amount of airfare regardless of their weight, even though their weight affects fuel consumption? Is it fair that a lighter traveler with baggage that is over a limit set by the airline has to pay extra, while an overweight passenger with a smaller baggage does not pay extra despite a higher overall weight? Conversely, is it ethical to set airfares based on one's body weight or charge extra for those travelers whose total cumulative body and baggage weight is above a certain threshold? Would travelers base their preference for one policy over another based on their own self-interest, that is, body weight? Would they support a policy that is more ethical or environmentally sustainable?

These are the questions this study aims to explore by combining ethics and environmental sustainability perspectives. More specifically, it seeks to answer how air travelers perceive the ethics of the current, most prevalent airfare policy (whereby the individual weight is not taken into account, but an extra fee must be paid for baggage over a certain threshold) and two alternative policies: a Threshold policy (which requires to pay extra if the body and baggage weight are over a threshold) and Unit-of-Body-Weight policy (where each airfare is calculated based on the individual body weight and baggage weight combined). Moreover, factors affecting preferred policy choices—such as one's own body weight, demographics, socio-economic background, flight habits, and attitudes towards environmental sustainability—are investigated. In doing so, the study contributes to knowledge in the area of sustainable aviation, specifically by demonstrating the complex relationship between ethics and environmental sustainability. Airline baggage policies are also used as a concrete case to investigate how consumers prioritize between self-interest, ethics, and environmental sustainability more generally.

Critics may point out that a change in weight of a single passenger on a single flight leads to a negligible change in the emissions. According to Steinegger (2017), only 0.02–0.03 kg of additional fuel is required to transport an additional 1 kg of payload for 1000 km for a range of Airbus aircrafts. A kilogram of fuel contributes 3.16 kg of CO_2 emissions (IATA, 2022). Conversely, Webber (2012) suggests that eventually small margins add up to large sums. For example, an extra kilogram of weight per person on an A380 flight from London to Sydney via Singapore results in extra 239 kg of fuel burnt (754.58 kg of CO_2 emissions). Assuming, these flights are daily that is 87,235 kg of fuel per year (275,662.6 kg of CO_2 emissions, an equivalent of total annual emissions of 18.75 US residents [The World Bank, 2023]). More importantly for this study, the case of payment for passenger weight is useful as a way to examine the relationship and potential conflict between economic, environmental and ethical considerations.

2 | BACKGROUND OF RESEARCH

2.1 | Ethics in tourism

Ethics in tourism contexts is a recent but growing area of research (Fennell, 2019; Holden, 2019; Winter, 2020). Tourism presents many interesting instances for ethics research due to some of its fundamental characteristics. It is largely hedonic — tourists travel away from the social and cultural norms of their home in pursuit of relaxation, enjoyment, and novel experiences, and their behaviors on holiday may not necessarily match those at home (McKercher, 2015). International travel also provides an opportunity to study the relativism of ethical decision-making by tourists of one culture when visiting another culture. This can cause a change in decision-making, as tourists choose either to conform to the destination's culture or to follow their own culture's ethics (Tolkach et al., 2017). In some cases, this leads to conflicts between hosts and guests, which has sparked studies of tourist misbehavior (Pearce, 2019; Pratt & Tolkach, 2022).

Although some research has dealt with ethics in tourism, various aspects of travel still need to be investigated to understand what travelers perceive as ethical and why. Inquiries into the ethical decision-making process are within the normative ethics domain. Various competing theories aim to determine whether an action is ethical. Reidenbach and Robin (1988) have developed a Multidimensional Ethics Scale (MES) that employs various ethical theories. The scale helps determine the extent to which a specific scenario is perceived as ethical in accordance with the theories of utilitarianism, egoism, deontology, justice, and relativism.

Utilitarianism and egoism are two branches of teleology, which focuses on the consequences of an action. More specifically, utilitarianism judges an action to be ethical when it brings the most overall good. Egoism, on the other hand, favors action that most benefits the self. The opposite of egoism would be altruism, where one forgoes personal benefits to benefit others. In contrast to teleology, deontology focuses on the action itself. An action is ethical if it can be applied as a universal law based on reason. According to the latter, an ethical action would never treat a human as the means to achieve a goal. Rules-based deontology lays the basis for contractualism, in which members of a society agree on what actions are accepted as ethical or rejected as unethical.

Relativism can be applied as a meta-ethical theory, which suggests that ethics are determined by individual cultures. From a normative perspective, an action is perceived as ethical if it is accepted within one's culture. Thus, what action is perceived as ethical in a given situation may differ culture to culture. MES specifically applies relativism to discuss the cultural influence on ethics.

The ethics of justice focuses on fairness, which includes protection of human rights and fair distribution of benefits. At the core of the ethics of justice is equitable treatment of all people. The ethics of justice serves also as a basis for the legal system. For example, if an unjust action takes place, justice can be restored with a corrective measure, such as paid compensation to the injured (Tolkach et al., 2017).

MES has been used in a variety of business and marketing scenarios (Mudrack & Mason, 2013) and has also been applied in the tourism field. Sheppard (2010) applied it to study the ethics of Alaska cruise ship passengers. The findings suggest that the more cruises tourists have been on, the more likely they are to consider cruise practices as ethical. Those who had more frequently taken cruises were more likely to take a hedonic utilitarian orientation. Hudson (2007) studied the ethics of travel to Myanmar under its military dictatorship. The respondents generally believed travel to Myanmar should not be banned; however, they were unsure about the ethical implications of their visit. Fennell and Malloy (1999) established that ecotourism operators were more ethical than adventure, fishing, cruise line, and golf operators.

2.2 | Environmental sustainability of air travel

Air travel is among the biggest contributors to climate change (Grewe et al., 2021; Le Quéré et al., 2020), and until the COVID pandemic hit in 2019, the airline industry had been growing continuously (ICAO, n. d.). The industry is dependent on fossil fuels, and while research and development of alternative fuels is ongoing — with bio-fuels offering promise in the short-term and hydrogen and/or electro fuels in the long-term (Dahal et al., 2021)—aviation will continue to be a highly polluting industry for years to come. In the meantime, other means of reducing airline's contribution to climate change should be considered, including passenger behavior.

Air travelers may not be aware of industry's contribution to climate change, may not be preoccupied with it, or may continue to fly despite their concern about it. These form awareness-attitude-behavior gaps (El Haffar et al., 2020). Even otherwise "green consumers" may continue to fly and simply offer justifications for their behavior. McDonald et al. (2015) revealed four strategies green consumers employ in relationship to air travel:

1. Do not change behavior, but justify it through travel product, travel context, or personal factors;
2. Reduce or restrict their flights;
3. Change other behavior to compensate for flying; and
4. Stop flying.

The first step in addressing the attitude-behavior gap in air travel requires an understanding of travelers' attitudes towards the environment. The New Environmental Paradigm (NEP) scale (Dunlap et al., 2000; Dunlap & Van Liere, 1978) is a common measure used to understand respondents' beliefs regarding the environment. The strength of this scale is that it does not focus on specific environmental issues, but it rather measures general attitudes and can thus be applied to a variety of contexts. NEP juxtaposes ecocentric and anthropocentric worldviews. The ecocentric worldview recognizes people as part of natural systems, while the anthropocentric worldview construes a general superiority of people over other organisms and nature. As a result, humanity may either to live harmoniously with the natural world or exploit and change it. The revised NEP scale has 15 items. Eight odd-numbered items are pro-NEP and seven are anti-NEP. They focus on attitudes towards limits to growth, anti-anthropocentrism, fragility of nature's balance, rejection of exceptionalism, and the possibility of an eco-crisis. Hawcroft and Milfont (2010) undertook a meta-analysis of NEP studies. They concluded that while NEP is not ideal and has been applied inconsistently since the 1970s, it is still advisable for use as a measure of environmental attitudes, given the lack of a better universally acceptable scale.

NEP has been widely applied in tourism studies, including those on air travel. Ritchie et al. (2021) investigated the influence of different attributes of carbon offsetting programs on passengers' willingness to adopt them. Their findings showed that the people who are most likely to participate in carbon-offsetting programs are younger travelers who are not frequent flyers, work full time, have families with children, are more altruistic, have higher community involvement, and have pro-environmental attitudes.

Kroesen (2013) used the NEP-scale to assess environmental attitudes of respondents and compared them to air travel behavior. No significant relationship between the two variables was found. However, six viewpoints based on levels of environmental awareness and air travel behavior were identified, namely integration, ignorance, denial, necessity, guilt, and indulgence/fatalism. Chen et al. (2011) applied NEP to study attitudes towards the environment amongst Taiwanese citizens. Their results pointed to moderate to high levels of environmental consciousness, especially amongst women and those with higher education. Nevertheless, pro-environmental air travel behavior was generally low.

2.3 | Baggage weight policies

Baggage policies and pricing strategies continuously diversify and have become increasingly sophisticated, with low-cost carriers typically leading innovation. Examples include tailoring dynamic pricing to individual customers through personalization and increased carry-on baggage allowance in lieu of checked items (IdeaWorksCompany, 2018). An increasing number of full-service (aka legacy) airlines have also adjusted their baggage policies, for example, by limiting the number of free-of-charge bags and by increasing checked-in luggage fees for extra bags (Baskas, 2018; Jet, 2019). Such baggage fee policies may face resistance and complaints from travelers and government agencies (Mufti, 2019).

Not only are luggage-charge policies controversial, but so is charging travelers according to their body weight. Bhatta (2013) suggested that charging passengers per kilogram of weight—their body and baggage weights combined—is the fairest and simplest solution and offers multiple benefits, including increased cost efficiency, incentives for healthier lifestyles, and environmental sustainability (i.e., reduction of carbon footprint). Melis et al. (2018) suggest that the continuously increasing body weight of air travelers negatively impacts airline economics, travel experience, safety, and the regulatory framework.

In 2013, Samoa Air became the first airline to charge travelers by the number of kilograms they bring to the aircraft. The price per kilogram varies depending on the length of the route (Hunter, 2013). The policy has been considered controversial, as people may not be able to control their weight, and it may seem unfair to ask passengers to pay different prices for the same service. Hawaiian Airlines implemented a policy to allocate seats for its passengers on a route between Hawaii and American Samoa based on the weight of passengers in order to distribute the weight on the aircraft more equally. The new policy was condemned as discriminatory as it was only applied on one route (Gulliver, 2016). In 2017, Finnair weighed its passengers to better understand the weight of the payload and its distribution in the cabin and to better calculate fuel consumption (Spinks, 2017). In 2019, the US Federal Aviation Administration advised airlines to update the estimates for how much travelers and baggage weigh on their flights, due to increases in median body weight of adult Americans (FAA, 2019). Airlines used existing data rather than weighing travelers to update their estimates. From the airlines' and airports' perspectives, weighing travelers may be difficult and time-consuming. From the consumer's perspective, being weighed may be seen as humiliating and/or discriminatory (Sampson, 2021). As of 2021, the average weights, including carry-on items, were updated to 190 pounds (86.2 kg) in the summer and 195 (88.5 kg) pounds in the winter, which is a 12% increase from previous estimates (Settembre, 2021). Considering that 42.4% of Americans are obese, airlines also have "Customer of Size" policies, which (theoretically) require that an additional seat must be purchased if passengers cannot fit into one seat, or recommend that these passengers upgrade to business or first class. These practices may similarly be seen as discriminatory, especially since obesity may be related to disability (Marcus, 2020).

2.4 | Ethical and environmental considerations of passenger weight

Flight pricing policies that are connected to passenger weight present an opportunity to explore the relationship between ethics and environmental sustainability. Specifically, we investigate how ethical perceptions and attitudes toward environmental sustainability relate, how each of them affect agreement on low-carbon baggage policies, and whether passenger weight affects this agreement. MES assists in understanding whether different policies are ethically acceptable to passengers, and how the acceptability varies based on different ethical theories (e.g., deontology, utilitarianism, egoism, justice, relativism). NEP helps explore the relationship between one's ethics and one's environmental attitudes toward environmental sustainability, for example, do people prefer policies that may reduce carbon emissions, even if they are discriminatory?; do they prefer policies that are harmful to the environment if it benefits themselves economically, and so forth. Previous research (e.g., Ritchie et al., 2021) indicates that an individual's socio-economic background may play a role in decisions related to carbon offsetting. Thus, there is merit in investigating various demographic, socio-economic and travel pattern characteristics in this study as well.

3 | RESEARCH METHODS

This quantitative study examined the attitudes of US respondents to different travelers and baggage weight policies. The study is exploratory in its nature, as it investigates a novel topic of ethics and environmental sustainability in relation to flight ticket pricing based on passenger weight. As such, its aim is to develop insights on a novel topic, which may then subsequently undergo further investigation through hypothesis testing in future research. As indicated in Mudrack and Mason's (2013) review, the context in which ethical research takes place is important. The outcomes of ethical judgment studies depend on specific scenarios and ethical dilemmas that research participants are presented with. There are no universal truths and no one-size-fits-all outcomes in research on ethics. Respondents were asked to judge how ethical the following three policies are:

- Standard policy – passengers pay a standard price, irrespective of their weight. The price includes 50 pounds (22.7 kg) of checked luggage plus a carry-on.
- Threshold Body Weight policy – passengers pay a penalty if their body weight exceeds 160 pounds (72.6 kg). The price includes 50 pounds of checked bags plus a carry-on.
- Unit of Body Weight policy – passengers pay a personalized price based on their own body weight per each pound of weight. A discount is applied for small-sized bag (under 50 lbs).

The Multidimensional Ethics Scale (MES) was used to investigate the ethical perceptions of respondents on a 7-point Likert scale (see Table 1).

In order to understand the factors affecting respondents' ethics, a range of personal information was collected from the respondents. Two screening questions were used first: age, and the number of flights taken on average per year prior to the outbreak of the COVID-19 pandemic. If respondents were under 18 years of age or had not taken flights before, they were considered unsuitable for participation in the study. Questions regarding general patterns air travel behavior followed. These included the typical number of flights taken per year, their usual trip duration, the purpose of their travel, and the typical amount of baggage they bring. These were followed by more specific questions regarding the most recent flight the respondents had taken, including the year of travel, the flight's duration, accompanying persons, the airline type, the class they traveled in, the cost of the flight, and the size of their checked baggage.

Respondents were then asked their weight and height. This helped determine whether their own body weight might affect their perception of how ethical different baggage policies are. Subsequently, respondents were asked to identify how ethically acceptable the three passenger and baggage weight policies were, utilizing the MES.

TABLE 1 MES scale.

Unfair	1	...	7	Fair
Unacceptable in my culture	1	...	7	Acceptable in my culture
Unacceptable for me	1	...	7	Acceptable for me
Unacceptable for my friends and family	1	...	7	Acceptable for my friends and family
Not based on sound judgement	1	...	7	Based on sound judgement
Not personally satisfying and pleasurable	1	...	7	Personally satisfying and pleasurable
Not OK if it can be justified by positive consequences	1	...	7	OK if it can be justified by positive consequences
Does compromise important principles by which I live	1	...	7	Does not compromise important principles by which I live
Does violate established social norms	1	...	7	Does not violate established social norms
Not morally right	1	...	7	Morally right

Source: Modified by authors, based on Reidenbach and Robin (1988).

Environmental sustainability attitudes were examined next. The researchers assessed that knowledge about the relationship between passenger and luggage weight and emissions could not be assumed. Therefore, respondents were informed of the relationship between the weight and baggage policies and carbon dioxide emissions. This was done to ensure validity, since we assume that respondents relate less weight to fewer emissions in the analysis. The authors recognized that this potentially introduced a bias, and could be considered a limitation of the study, even though the information about the relationship was presented neutrally without any value judgments. The potential bias does not affect the objectives of the study as we examine the differences between the groups rather than attempt to establish environmental attitudes in the population overall. The questionnaire concluded with demographic questions regarding gender, nationality, ethnicity, education, and household income (see Appendix 1). First, respondents were asked whether they would prefer a baggage policy that would help reduce carbon emissions in a 5-point Likert scale. Second, their pro-environmental attitude in general was measured through the 15-item New Environmental Paradigm (NEP) scale, following Ritchie et al. (2021) approach.

Human research ethics approval was gained from a US university. Respondents were recruited through a marketing research company. Data collection was undertaken in July and August of 2021. A total of 1168 responses were collected, of these, 1012 were valid. The mean body weight of the respondents was 177 lbs. (80.43 kg). Respondents were grouped by weight, according to CDC classifications (2021), that is, the classification is not based on the mean weight of an American, but rather on what weight is considered to constitute underweight, healthy weight, overweight or obesity. Those weighing below 124 lbs (56.2 kg). were considered underweight, those between 125 and 168 lbs. (56.7–76.2 kg) were considered of healthy weight, those between 169 and 202 lbs. (76.7–91.6 kg) were classified as overweight, and over 203 lbs. (92 kg) were grouped as obese. We used these labels as weight categorizations only, without making any claims about the participants' states of health used in one of those categories. The study sample does not reflect the overweight and obesity rates in the US (according to CDC, 2022, 40.9% of Americans are obese), as the study focuses on the US residents that have experience flying. This cohort tends to be more well-off. There is an inverse relationship between wealth and the obesity in the US (Wolfe et al., 2019). The resultant spread across weight categories within the sample benefitted the study as having too few individuals within one of the weight categories would preclude statistical analysis. Besides weight, Body Mass Index (BMI) was calculated as it takes into consideration a person's height. The paper's presentation of results provides analysis based on weight, although BMI analysis was also undertaken. No significant differences in results emerged between the two. Moreover, the current media and policy discussion focuses on weight rather BMI (e.g., Hardingham-Gill, 2023; Marcus, 2020), thus the paper presents the results of analysis based on weight to maintain its relevancy. Respondents' demographic profiles are summarized in Table 2.

Respondents' air travel patterns varied. Most respondents had taken between one and five flights in the past 5 years and usually traveled with one checked item (see Table 3).

The most recent leisure flights demonstrate a good spread between the years they were taken in terms of duration, size of travel party, flight cost, and number of bags. Most flights were taken on full-service airlines and in economy class (see Table 4).

The analysis generally followed previous studies that had applied MES (e.g., Fennell & Malloy, 1999; Tolkach et al., 2017). Our data analysis first involved descriptive statistics. MES mean scores were identified for each policy. Based on the results of an exploratory factor analysis, it was possible to derive a grand mean score for each policy. ANOVA and paired *t*-tests were undertaken to identify differences in the sample according to their demographics, weight, and flying patterns. Subsequently, the relationship between travelers' environmental attitudes, their ethical perceptions of luggage policies, and their body weights was investigated through a regression model.

4 | RESULTS

4.1 | Ethical acceptance of policies across weight categories

The Standard policy is seen overall as a more ethically acceptable policy across the body mass groups. However, there are statistically

TABLE 2 Respondents' demographic profile.

	Percent		Percent
Gender		**Income**	
Male	60.2	Up to $49.9 k	34.0
Female	38.7	$50 k–$109.9 k	38.3
Other/Prefer no answer	1.1	$110 k+	27.7
Age		**Weight**	
18–35 years	29.5	Underweight	14.6
36–65 years	38.7	Healthy Weight	29.7
66 years +	31.7	Overweight	32.4
		Obese	23.2
Ethnicity		**BMI Category**	
White	74.5	Underweight	6.7
Black/African	11.8	Healthy Weight	34.2
Asian	5.7	Overweight	35.1
Latin/LatinX	4.5	Obese	24.0
Other	3.5		
Education			
High school degree or less	21.5		
Vocational or undergraduate degree	47.1		
Postgraduate degree	31.3		

TABLE 3 Respondents air travel history.

	%
Number of return flights in past 5 years	
1–5	54.6
6 to 10	22.1
More than 10	23.2
Av. number of return flights per year before COVID-19	
1–3	58.3
4 to 7	30.3
8 or more	11.4
Majority of return flights, on average	
Only business trips	7.5
More business than leisure trips	13.9
Same amount of business and leisure trips	15.1
More leisure than business trips	14.7
Only leisure trips	48.7
The majority of return flights were	
Without check-in luggage	27.1
With one piece of check-in luggage	53.5
With two or more pieces of check-in luggage	19.5

significant differences between underweight and healthy weight travelers and overweight and obese travelers, as can be seen from Table 5. There is a clear pattern that the heavier the weight of the group, the less accepting it will be of the Threshold and Unit of Body Weight policies. Underweight and healthy weight respondents were more accepting of the Threshold and Unit of Body Weight policies than their overweight and obese counterparts.

Figure 1a–c demonstrates the results of the MES according to weight categories. The Standard policy received similar rates of acceptance across various weight categories and ethical theories. The policy was slightly less acceptable for the underweight, especially on deontological items (i.e., social norms and principles). However, those results are not statistically significant. Greater differences were evident in regard to Threshold and Unit of Body Weight policies. The Standard policy was judged acceptable by those overweight participants according to relativist theories (i.e., ethically acceptable in their culture and to their friends and family). Obese respondents showed a significantly higher acceptance of the Standard policy based on contractual deontology. There were statistically significant differences in the responses of underweight respondents compared to those from overweight and obese respondents on most MES-items for both Threshold and Unit of Body Weight policies. Most of the assessments made by respondents with healthy weights were statistically significant in their difference from those of their obese counterparts. Their responses on utilitarian and egoistic items also differed from overweight respondents.

Overall, respondents tended to prefer the weight and baggage policy that would benefit themselves most economically. Interestingly, those groups that would benefit more from a certain policy found it more ethical according to relativist, deontological, as well as justice theories. Threshold and Unit of Body Weight policies were generally less acceptable based on deontology. This suggests that these policies may be perceived as somewhat discriminatory (see Appendix 2).

TABLE 4 Most recent leisure flight characteristics.

Most recent leisure flight was …		**Booking class of most recent leisure flight**	
This year	34.6	Economy	55.7
Last year	20.8	Premium Economy	23.1
2 years ago	28.0	Business	12.4
3 years ago or longer	16.7	First	8.8
Flight duration of most recent leisure flight		**Per person ticket price of most recent leisure flight**	
Less than 3 h	33.4	Up to $200	38.8
Between 3 and 5 h	38.2	$200–$400	31.3
More than 5 h	28.3	$400 or more	29.8
Travel party of most recent leisure flight		**Luggage status of most recent leisure flight**	
Partner/spouse	37.6	No check-in luggage	16.5
Alone	32.7	One small luggage (about 20 lbs)	17.6
Friends & Relatives	22.1	One medium luggage (about 30 lbs)	31.7
Family travel / Other	7.5	One large luggage (up to 50 lbs)	23.8
Airline type of most recent leisure flight		One extra-large luggage (over 50 lbs)	4.2
Budget/Low cost airline	29.2	Two large luggage (over 100 lbs total)	6.2
Full service airline	65.3		
Not sure	5.5		

TABLE 5 Comparison of grand means of ethical acceptance of baggage policies.

	Underweight (A)	Healthy weight (B)	Overweight (C)	Obese (D)
Standard Policy	4.90	5.19	5.25	5.30
Threshold	4.26 (C D)	4.01 (C D)	3.60	3.40
Unit of Body Weight	4.44 (C D)	4.16 (C)	3.79	3.63

Note: Results are based on two-sided tests assuming equal variances with significance level 0.05. For each significant pair, the key of the smaller category appears under the category with larger mean. Tests are adjusted for all pairwise comparisons within a row of each innermost sub-table using the Bonferroni correction.

4.2 | Demographic and socio-economic factors impacting acceptance of the policies

The only significant difference based on the ethnicity of respondents was that white respondents were more accepting of the Standard policy than other groups. A two-way ANOVA was performed to determine if gender (males vs. females) and weight (Underweight, Healthy weight, Overweight, Obese) had a significant effect on ethical acceptance of the three different baggage policies (see Figure 2). A two-way ANOVA revealed that gender has a statistically significant effect on the ethical acceptance of the standard policy ($p = 0.002$), the threshold policy ($p < 0.001$), and the unit body weight policy ($p < 0.001$) with males having a higher acceptance level for each policy. Further, Tukey's test for multiple comparisons found that for threshold policy and the unit body weight policy, underweight and healthy weight respondents have higher ethical acceptance than overweight and obese respondents. There are no statistically significance differences between the different weight segments in terms ethical acceptance of the standard policy.

Respondents were divided into three groups of approximately equal sample size, namely 18–35, 35–65 and over 66 years old. A further two-way ANOVA was employed to examine the potential importance of age (18–35 years; 36–65 years; 66 years +) and passenger weight as factors of influencing ethical acceptance of luggage policies (see Figure 3). The two-way ANOVA showed that age has a statistically significant effect on the ethical acceptance of the standard policy ($p = 0.003$), the threshold policy ($p < 0.001$), and the unit body weight policy ($p < 0.001$). Additionally, weight also had a statistically significant effect on the ethical acceptance of the threshold policy ($p = 0.043$), and the unit body weight policy ($p = 0.081$). Further, Tukey's test for multiple comparisons found that for threshold policy and the unit body weight policy, air passengers aged 66 years and older have lower ethical acceptance of the threshold policy and the unit body weight policy than air passengers aged 18 to 35 years and 36 to 65 years, across all weight categories.

Further analysis reveals that there was no significant difference between age groups on the ethical acceptance of the Standard policy based on sound judgment and positive consequences. However, the middle-aged and senior respondents were more accepting of the policy across other MES items. There was little difference between the younger and middle-aged respondents on the MES items. Younger respondents were less likely to consider Threshold and Unit of Body

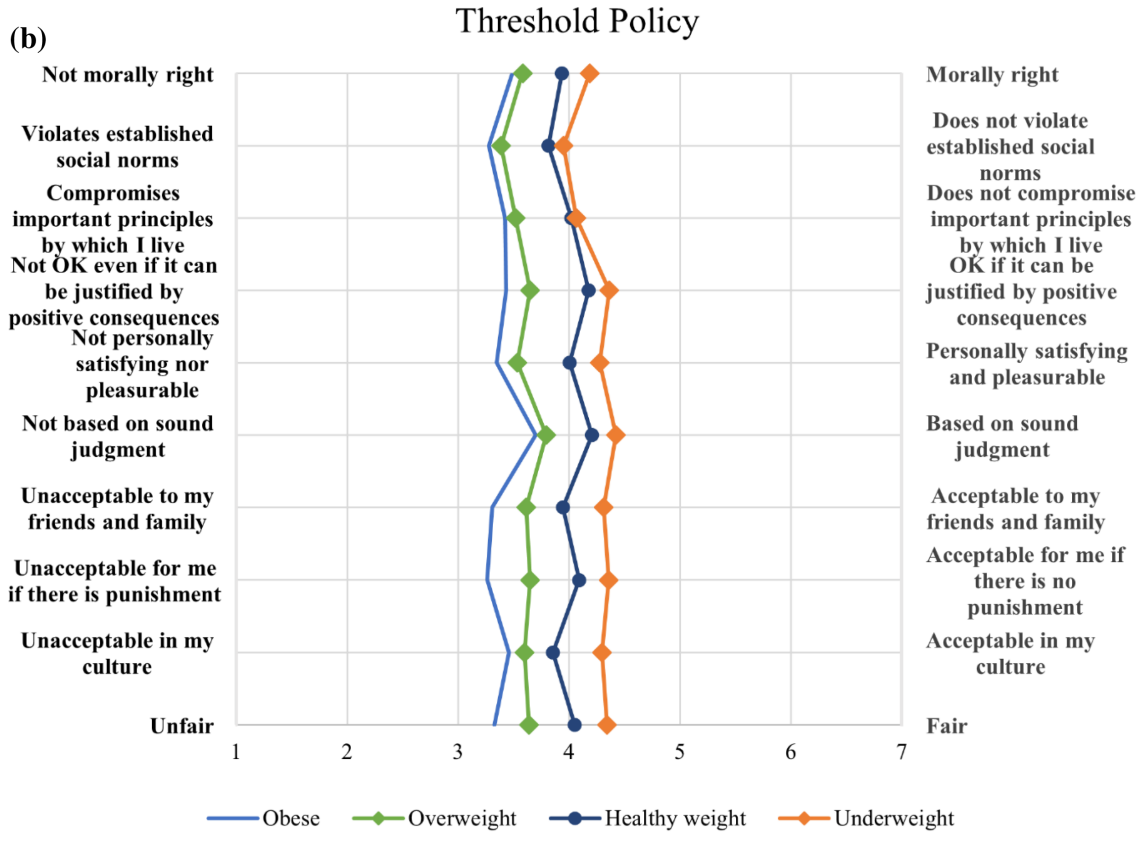

FIGURE 1 (a–c) Acceptance of different policies on the MES-scale.

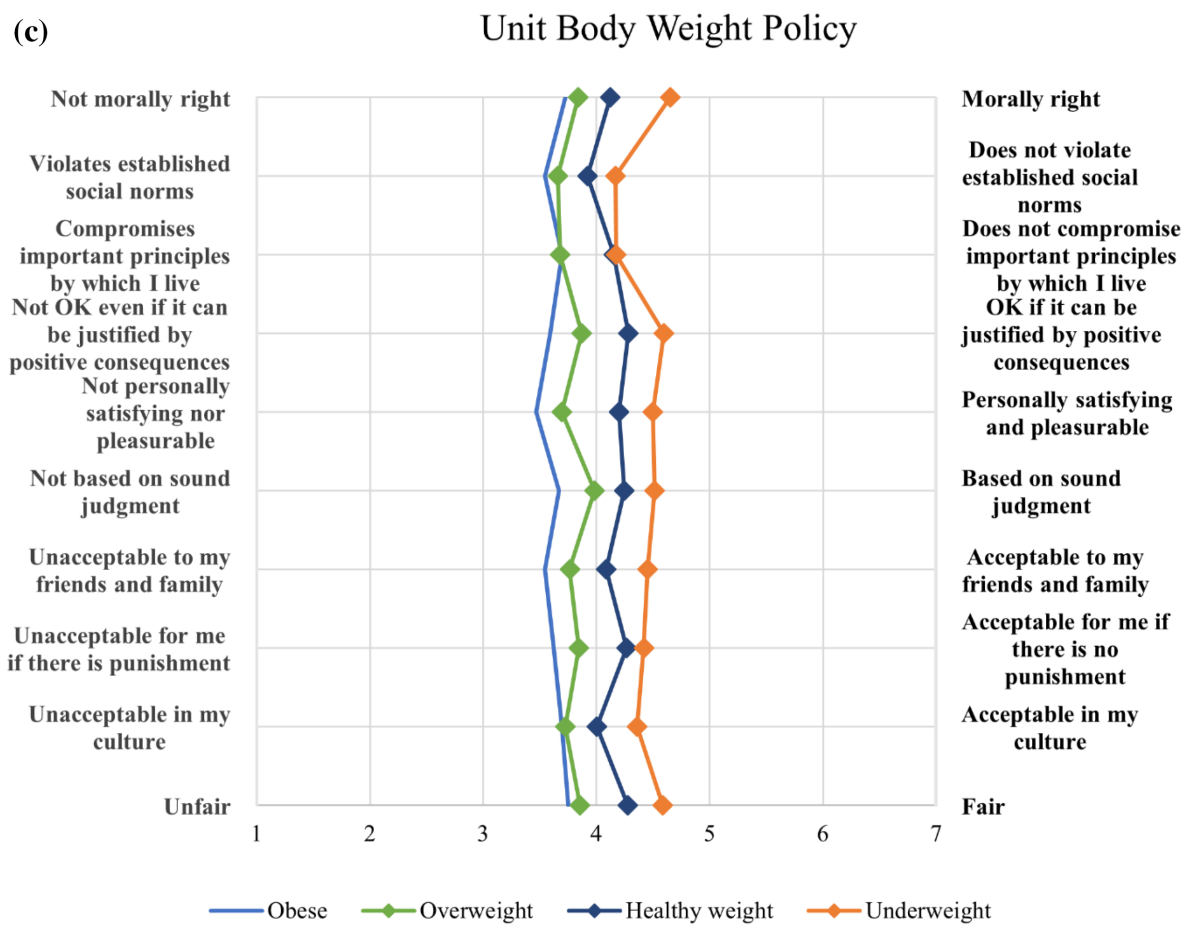

FIGURE 1 (Continued)

Weight policies to be breaking established social norms. To a lesser extent, younger respondents also considered the Unit of Body Weight policy to compromise their principles. Both items refer to the deontological approach to ethics. Responses by younger and middle-aged respondents to the Threshold and Unit of Body Weight policies were significantly different from the senior respondents across all items on the MES (see Appendix 3).

Differences were also identified according to respondents' levels of education. Those with vocational or undergraduate degrees were more accepting of the Standard policy than those with a high school education or less. However, respondents with postgraduate degree were significantly more accepting of all three policies than other respondents. This was also reflected in the MES. The only exception is that there was no significant difference between the groups regarding the deontological items. That is, respondents with a postgraduate degree also considered the Threshold policy and Unit of Body Weight policy to be breaching personal principles and social norms.

Differences between respondents of different income levels were noted. Those medium-income earners were more accepting of the Standard policy than those with lower income. However, high-income earners were more accepting of the Standard policy than the other two groups. The high-income earners were significantly more accepting of the Threshold and Unit of Body Weight policies than the low- and middle-income earners. A similar pattern emerged across the MES items. All income groups considered the Threshold policy and Unit of Body Weight policy less ethical from a deontological perspective.

4.3 | Relationship between flying patterns and acceptance of the policies

There was no correlation between the body weight of respondents and their flying patterns, but acceptance of the policies did vary based on the respondents' travel patterns. Respondents who paid more than US$400 for their most recent flight were more accepting of all weight and baggage policies than those who paid less than US$200 and between US$200 and US$400. This pattern was generally the same across MES items. Respondents who flew less frequently were less accepting of the Standard policy than the respondents who flew an average of six or more times a year. However, there were no differences for the other two policies. Respondents who flew either premium economy, business, or first class were more accepting of alternatives to the Standard baggage policy. Still, the Standard policy was the most accepted across all categories. Both Threshold and Unit of Body Weight policies were more ethically acceptable to respondents who flew premium economy, business, or first class rather than

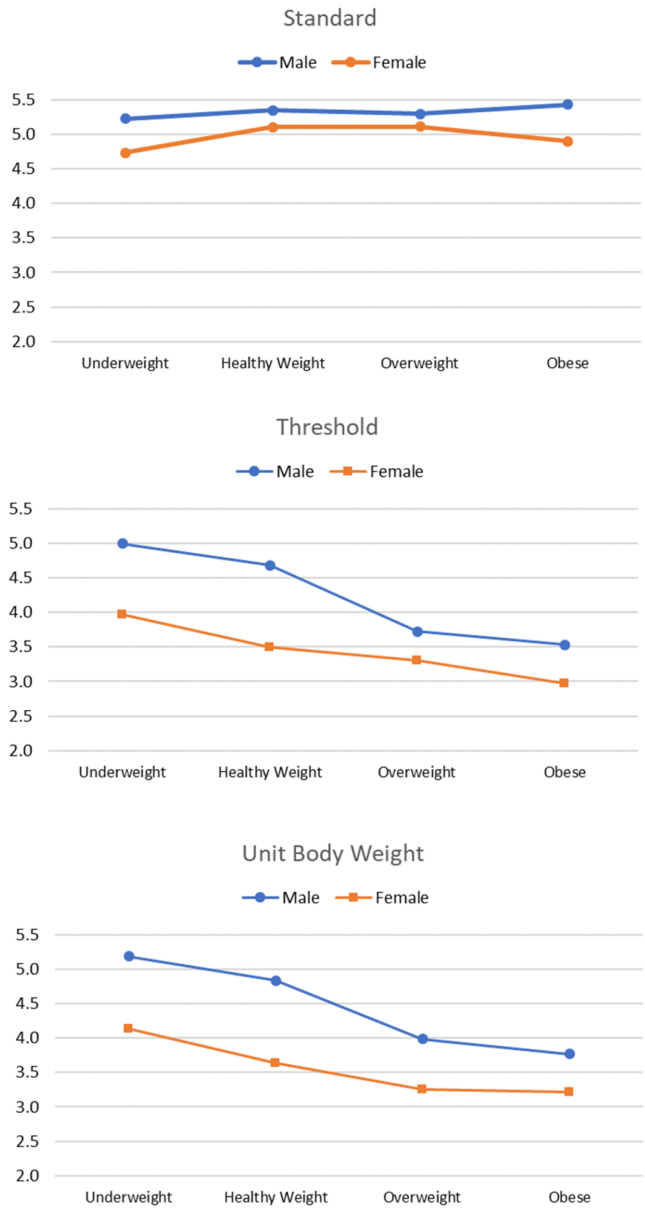

FIGURE 2 Results of a two-way ANOVA to determine if gender and weight affect acceptance of baggage policies.

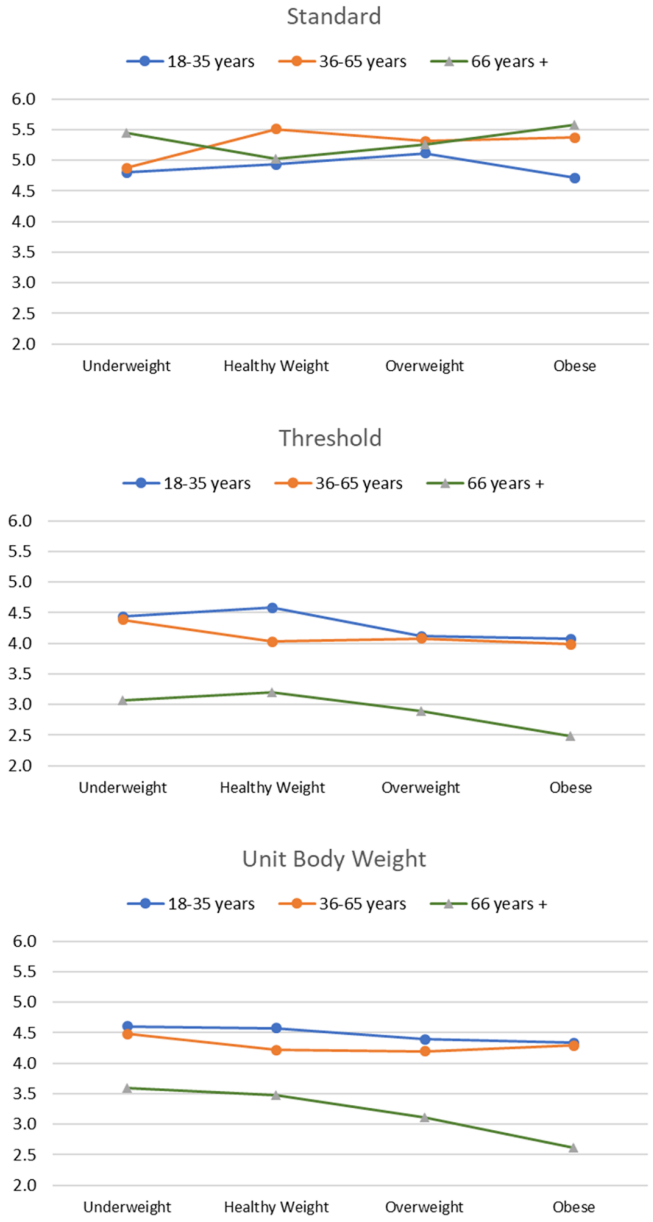

FIGURE 3 Results of a two-way ANOVA to determine if age and weight affect acceptance of baggage policies.

economy class across all MES items. Respondents who flew with a full-service airline considered the Threshold and the Unit of Body Weight policies more ethical than low-cost carrier customers did.

4.4 | Environmental attitudes, ethics, and baggage policies

In order to understand the relationship between passengers' environmental attitudes, their ethical perceptions of luggage policies, and the influence of weight on both, we developed a model to investigate air passengers' preferences for baggage policies that would help reduce carbon emissions. This was the dependent variable and was asked on a scale of 1 to 5 where 1 means "Strongly Disagree" and 5 means "Strongly Agree." Based on the literature, the explanatory variables are a measure of environmental attitudes (NEP), a measure of the air passenger's weight (according to the defined weight categories used earlier), and a measure of the air passenger's perceptions regarding the ethics of baggage policies (MES).

To minimize the possibility of multicollinearity, a principal components analysis with a varimax rotation was run on the 15 items of the NEP scale. Two factors emerged. The first factor explained 30.2% of the total variance and contained the ecocentric statements, whereas the second factor, accounting for a further 26.7% of the total variance, contained the anthropocentric NEP statements (see Appendix 4). These two measures, ecocentrism and anthropocentrism, were used

in the model as independent variables. It was expected that the stronger the attitudes of environmental sustainability held by the air passenger were, the more likely they would be to prefer a luggage policy that could help reduce carbon emissions. We also expected that the weight of passengers would be negatively correlated with their preference for a luggage policy that helps reduce carbon emissions, as heavier passengers would be more adversely affected by such a policy.

Air passengers' perceptions of how ethically acceptable the three baggage policies (Standard, Threshold, and Unit of Body Weight) were formed the remaining independent variables. The 10 Multidimensional Ethics Scale (MES) items for the three different policies were aggregated into a grand mean across the 10 items. The measures for the three baggage policies were introduced separately in three ordered logit regression models. We expected that the more ethical the air passengers believed a newly proposed policy (i.e., Threshold and Unit of Body Weight) to be, the more likely those passengers would be to prefer a baggage policy that helps reduce carbon emissions. Age and gender are introduced as control variables. Table 6 reports the results.

Air passengers who considered the Threshold and the Unit of Body Weight policies to be ethical were more likely to prefer a luggage policy that helps reduce carbon emissions. A one-point increase in the grand mean value of the MES items for the Threshold and Unit of Body Weight policies led to a 6.6% and 7% increase, respectively, in the probability of agreeing or strongly agreeing with the introduction of a baggage policy that helps reduce carbon emissions. Instead, no significant relationship was observed between the ethical perception of the Standard baggage policy and the preference for a baggage policy that helps reduce carbon emissions. As predicted, more ecocentric air passengers were more likely to prefer a baggage policy that helps reduce carbon emissions. A one standard deviation increase in the ecocentric NEP scale was associated with an increase in the probability of agreeing or strongly agreeing with the introduction of a baggage policy that helps reduce carbon emissions ranging from 43.4% to 45.4%. Despite being informed of the relationship between an aircraft's payload and carbon emissions, obese passengers were less likely to prefer a baggage policy that helps reduce carbon emissions. Compared to underweight respondents, the probability of agreeing or strongly agreeing with such a policy decreased by as much as 18.1% for obese respondents.

We also included demographic variables in the analysis. Female respondents registered a lower preference (up to 9.1%) than male respondents for a baggage policy that helps reduce carbon emission, even though the statistical significance of the result is not consistent across the estimated models. Respondents over 66 years of age are 14% to 20% less likely to prefer alternative weight and baggage policies than younger cohorts. Results did not differ significantly according to ethnicity.

5 | DISCUSSION

5.1 | Standard versus alternative policies

The Standard policy was considered more ethically acceptable than the two alternative policies across all respondent segments. Of the two alternative policies, the Unit of Body Weight policy was found more acceptable. This is unsurprising considering that status quo bias has been recognized in the literature (e.g., Bostrom & Ord, 2006; Eidelman & Crandall, 2012; Ritov & Baron, 1992). The status quo may be preferred simply because it already exists and its viability is proven. The longevity of a status quo is often taken as proof of its ethical goodness (Eidelman & Crandall, 2012). In addition, there is an aversion to action. Even if maintaining the status quo leads to change, the status quo may be preferred as inaction does not require effort, and there is no transaction cost associated with the change. Aversion to uncertainty also contributes to a preference for the status quo (Bostrom & Ord, 2006; Ritov & Baron, 1992). Bostrom and Ord (2006) propose that when a choice is communicated and framed in such a way that clearly suggests the status quo to be detrimental, the preferred choice is more likely to shift towards action. This might offer an avenue for further research seeking to understand how messaging can stimulate acceptance of air travel policies that benefit environmental sustainability.

The two alternative policies (Unit Body Weight and Threshold) were more acceptable for respondents with lower weight and BMI, males, younger respondents, more educated respondents, those who are more well-off financially, and those who pay more for their flights and travel in premium classes (premium economy, business, or first class). For those with lower weight and/or BMI, this can be explained by simple self-interest. These respondents have the least to lose economically (or, rather something to gain when it comes to the Unit of Body Weight policy) from the alternative policies.

The preference for alternative policies among the more educated, the better off, and those who pay more for their flights could be explained by the fact that, in relative terms, these respondents have less to lose from the alternative policies. Consumers often see the more sustainable choice as also being more expensive (e.g., Deloitte, 2021), which makes it relatively less attractive for those with less disposable income to choose more sustainable options. In other words, the more affluent may believe that they can afford to make the more sustainable and/or ethical choice because the added cost will be felt less by them.

There is a strong correlation between age and weight ($r = 0.173$, $p < 0.001$). Younger, less heavy respondents would therefore benefit from the Unit of Body Weight policy, creating a possibility that at least in the present scenario, young respondents are driven mainly by self-interest. Another explanation for younger respondents' acceptance of alternative policies could be that they are driven by deontological, justice, or utilitarian (as in consequences for broader society) ethics. Literature generally supports the notion that young consumers are more socially and environmentally conscious (Dardanoni & Guerriero, 2021; Fisher et al., 2012). Thus, they are more likely to forego personal benefit for benefit of wider society. This would support Ritchie et al.'s (2021) study, which found that younger people are more likely to consider carbon offsets. Openness to change amongst young consumers that contributes to political consumer behavior (Quintelier, 2014) may also be a factor for their stronger support of alternative baggage policies. On the contrary, Tolkach et al.'s (2017) study of ethically dubious behavior has suggested that younger

TABLE 6 Predictors of preference of a baggage policy that helps reduce carbon emissions.

	Regression 1: Standard policy			Regression 2: Threshold policy			Regression 3: Unit body weight policy		
	Coeff.	prob.	$ME\|_{y\geq 4}$	Coeff.	prob.	$ME\|_{y\geq 4}$	Coeff.	prob.	$ME\|_{y\geq 4}$
Constant	−3.171	0.000		−3.477	0.000		−3.625	0.000	
Ethical perceptions									
Standard	0.0002	0.996	0.000						
Threshold				0.266	0.000	0.066			
Unit Body Weight							0.282	0.000	0.070
Environmental attitude									
Ecocentrism	1.824	0.000	0.454	1.776	0.000	0.442	1.748	0.000	0.434
Anthropocentrism	0.322	0.000	0.080	0.127	0.114	0.031	0.153	0.051	0.038
Weight (ref: underweight)									
Healthy Weight	−0.121	0.539	−0.030	−0.104	0.600	−0.026	−0.074	0.708	−0.018
Overweight	−0.421	0.040	−0.105	−0.311	0.135	−0.077	−0.259	0.215	−0.064
Obese	−0.733	0.001	−0.181	−0.577	0.009	−0.143	−0.540	0.015	−0.134
Age (ref: 18–35)									
36–65	−0.066	0.676	−0.016	−0.017	0.916	−0.004	−0.006	0.968	−0.002
66+	−0.812	0.000	−0.200	−0.562	0.001	−0.139	−0.551	0.002	−0.137
Gender (Female)	−0.365	0.008	−0.091	−0.232	0.098	−0.058	−0.177	0.211	−0.044
Ethnicity (ref: White)									
Black / African	0.241	0.248	0.059	0.215	0.305	0.053	0.242	0.250	0.060
Asian	−0.173	0.512	−0.043	−0.154	0.564	−0.038	−0.144	0.591	−0.036
Latin / LatinX	−0.014	0.959	−0.004	−0.152	0.595	−0.038	−0.146	0.611	−0.036
Other	−0.073	0.814	−0.018	−0.069	0.826	−0.017	−0.121	0.697	−0.030
Threshold 1	1.386	0.000		1.422	0.000		1.420	0.000	
Threshold 2	3.689	0.000		3.801	0.000		3.808	0.000	
Threshold 3	5.845	0.000		6.023	0.000		6.050	0.000	
Pseudo R^2	0.194			0.211			0.214		

respondents are more accepting of behaviors that older respondents deem unethical. This suggests that openness to new experiences may lead both to more ethical decisions in some scenarios and less ethical decisions in other scenarios. Thus, the ethics of young travelers is a special area of interest for further research.

Tolkach et al. (2017) found younger people and males to be more receptive to ethically dubious behaviors in scenarios presented to them than females and older people were. Interestingly, the results in Tolkach et al. (2017) suggest that younger males are less ethical, whereas the present study suggests they are more ethical, as the alternative policies are likely to lead to reduced carbon emissions. Similarly, the variance in responses according to gender is puzzling, as females are typically more ethical and environmentally conscious than males. In the present study, there was no significant difference between genders regarding preferences for a baggage policy that results in lower carbon emissions, nor in the ecocentrist worldviews. Yet females considered both alternative baggage policies less ethical. A possible explanation for this is that women may prioritize the ethics of possible discrimination over environmental sustainability in this case. The relationship between environmental sustainability and ethics is discussed further in the following.

5.2 | Environmental sustainability, ethics, and self-interest

The alternative (Threshold and Unit of Body Weight) baggage policies will lead to more efficient fuel consumption that will in turn reduce carbon emissions from aircrafts, and they are thus more economically viable and environmentally sustainable (Bhatta, 2013). These consequences benefit the common good, albeit external to decision-makers, that is, the passengers. On the face of it, this should define both alternative policies as the right choice from both ethical and environmental sustainability perspectives. Despite this, the alternative policies were considered less attractive by the respondents when juxtaposed against ethical and personal issues.

Rather than being guided by principles of what is right or wrong, most responses in the survey were determined by self-interest. This is clearly visible based on the correlation between one's weight and

one's perceptions of baggage policies. Differences between individual MES-item scores for each weight category were not as strong as differences between weight categories. This suggests that self-interest was affecting respondents' understandings of what is morally right. Respondents were for the most part unable to separate themselves from the scenario. McKercher (2015) claimed tourism is an egoistic activity, and thus the dominant role of self-interest in the present study is not surprising. Beyond weight, respondents' income brackets also impacted their preferred travel policy, since an increase in cost of travel may make flying altogether prohibitive.

Another immediate negative impact of such policies would be that passengers would have to disclose their weight and be reminded of it, which can be unpleasant for those dissatisfied with their body size (Sampson, 2021). Those who are overweight may also be economically disadvantaged by the new policies. Considering the pervasive issue of obesity (WHO, 2021), only the minority of air passengers will benefit economically from the change. The alternative policies may also be considered unjust and breaching of privacy. A practice of paying a different price for the same service based on an external factor may also be viewed as unfair. Nonetheless, this is a common practice in both air transport and accommodation, where it is accepted that the price of the same seat on an aircraft or the same room at a hotel will fluctuate according to demand, timing of the purchase, and the platform used (Meatchi et al., 2021).

Alternatives to the Standard policy were generally considered less ethical, especially on deontological items. Even in cases where a certain segment generally considered a policy acceptable, there were fewer differences between the groups (e.g., by level of income or education) when it came to deontological items, that is, personal principles. There was less opposition to the Unit of Body Weight policy than to the Threshold policy because the former does not apply a discriminatory rule. The Threshold policy may be perceived as discriminatory because it targets a specific group of people, those with weight over a given threshold. Thus, this study's results concur with concerns voiced in the popular media (Marcus, 2020; Sampson, 2021) regarding policies that are punitive for the overweight. The Unit of Body Weight policy was more acceptable on deontological and justice items. This is likely due to the policy applying a simple principle to all passengers: the price is determined based on a unit of weight. It is equitable to all, as those with smaller weight and small baggage can save, while those with a high combined body and baggage weight pay more.

It can be argued that despite this, in practice, airlines have to a certain extent already been implementing a Threshold policy by suggesting obese passengers upgrade to business class, purchase a second seat in the economy, or wait for a less crowded flight where they can occupy two spare seats (Hewitt, 2019). Most airlines reject the possibility of weighing passengers as the process itself may be deemed humiliating (Sampson, 2021). Responses to the relativist items (such as whether these policies would be acceptable to friends, family, or broader in their culture) reflected the respondents' awareness that weight is an issue in the US, that the policy may affect friends and family, and that it is therefore less likely to be accepted in US society. This suggests avoiding discrimination is key for many respondents when they judge whether they perceive a baggage policy to be ethical.

This study demonstrates the clash of material and immaterial costs and benefits to the self and others, which complicates ethical decision-making. Although sometimes difficult to discern, we find that self-interest remains the top priority for most respondents. Some groups, for example, women and older people, prioritize ethics (mainly avoiding discrimination) over environmental sustainability. While others, for example, younger people, prioritize environmental sustainability over ethics. Broadly, it seems that environmental sustainability has a lower priority than ethics in cases where the two do not align. This has implications for sustainable tourism development, as it calls attention to the importance of the relationship between ethics and sustainability.

Sustainability is one of the most prominent topics in tourism studies, while explicit engagement with ethics is less frequent (Fennell, 2019; Jamal & Higham, 2021). This is somewhat surprising as sustainable tourism implies a moral obligation of tourism stakeholders to benefit (or at least not to harm) the environment and society. Sustainable tourism has frequently prioritized environmental concerns over other dimensions of sustainability. Although more recently the focus has been shifting towards quality of life and community well-being (Moscardo & Murphy, 2014). Our study shows that while ethics and sustainability are generally aligned, contradictions may appear between the two concepts leading to challenging dilemmas, such as whether humans should be prioritized over nature, whether the rights of an individual can be foregone for the common good, whether means can justify ends, and so forth. This study demonstrates one such instance, where it seems that human rights (the right to not be discriminated against) are prioritized over environmental concerns. Decision makers in aviation, and in other parts of the tourism system, need to be aware of this relationship when they attempt to implement initiatives or policies to improve sustainability, as they may be hindered by what are perceived to be more important ethical issues or by self-interests.

In the present study, the ethical and environmental sustainability concerns of the more sustainability-oriented group were aligned with self-interest, making it difficult to separate their motivations. Extending McDonald et al.'s (2015) work, future studies could focus on scenarios where the more ethical and/or sustainability-conscious group needs to act against its own self-interest. This would help to understand what factors make travelers behave against their principles, that is, when egoism trumps deontology.

6 | IMPLICATIONS AND CONCLUSION

The study has investigated issues around airline baggage policies, a topic widely discussed in the media over the years (e.g., Hunter, 2013; Marcus, 2020; Mufti, 2019; Sampson, 2021; Spinks, 2017), but largely overlooked in academic literature. The study contributes to knowledge in the area of sustainability and air travel. In particular, it complements other studies on sustainability considerations in passenger

decision-making process. Previous research has investigated the attitude-behavior gap to understand why passengers concerned about climate change still choose to fly (e.g., El Haffar et al., 2020; McDonald et al., 2015), and if passengers still need to fly, how to nudge them towards offsetting their carbon emissions (Ritchie et al., 2021). This study extends existing literature on sustainable air travel by: examining the level of acceptance of alternative luggage policies by different segments of air travelers, illuminating how the ethics of these policies are determined across various normative ethical theories, and demonstrating the complex relationship between ethics and environmental sustainability.

In particular, it compared the extent to which US passengers would find the following three policies ethically acceptable: the Standard policy, that is, passengers paying a standard price irrespective of their weight, including 50 pounds (22.7 kg) of check-in baggage; the Threshold policy, that is, passengers pay a penalty if their body weight exceeds 160 pounds (72.6 kg); and the Unit of Body Weight policy, that is, passengers pay a personalized price based on their own body weight per each pound of weight. The Standard policy was found most acceptable, followed by the Unit of Body Weight and Threshold policies. The Threshold policy may be perceived as discriminatory, as it targets a specific group. The high rate of acceptance of the Standard policy may be due simply to its maintenance of the status quo. The policy preferences of the respondents were explained mostly by self-interest. However, potentially younger generations may be accepting of alternative policies due to their general openness to change. Respondents were generally concerned with whether the alternative policies would be accepted by society, since these measures may introduce material and immaterial disadvantages (e.g., negative feelings and higher airfares). In terms of the relationship between sustainability and ethics, the paper demonstrates that the more sustainable choice is not necessarily considered more ethical. As such, it highlights the importance of conceptual separation between the two in tourism research and theory development, as well as further exploration of their complex relationship.

In terms of practical implications, the study provides directly applicable insights for airline managers and policy makers considering alternative passenger weight policies. Considering that international air transport agreements, airline transportation policies and baggage pricing schemes are up to several decades old (i.e., transatlantic two-piece concept, 23 kg/50 lbs. rule, etc.), airline decision makers and policy makers may want to shy away from threshold policies, as potential customers can perceive these as discriminatory, while body weight policies are more acceptable among new cohorts of customers, especially when targeting younger consumers. The study also offers an opportunity to see how consumers prioritize between self-interest, ethics, and environmental sustainability in situations where sustainability and ethics do not necessarily overlap. It finds that for most respondents, self-interest is prioritized, followed by ethics, and finally by environmental sustainability (although the last two differ between groups). This suggests that self-interest and ethics need to be considered when trying to incentivize consumers to act more sustainably.

The current study was undertaken on a US sample, which is still the largest and most progressive market environment for civil air transport. Future research may focus on other regions with a different body mass profile. According to CDC (2022), approximately 42% of Americans are obese, thus alternative policies in this research would disadvantage many. Responses in a country where obesity is less of an issue may be different. A cross-cultural comparison would be of interest since ethical and diversity issues are often relativist, that is, views of what is ethical vary between cultures and societies. Alterations to the experimental design with different weight thresholds and/or other parameters should also be considered.

This study included a status quo item—the Standard policy. An alternative scenario that excludes a status quo would be beneficial to understand whether the ethical judgment is independent of prior experience. A limited set of policies was included in this study, thus not covering all existing and potential baggage and passenger weight policies. For example, purchase of the second seat by an overweight passenger was not included. Future studies may investigate ethics of other alternative policies not addressed in this study. Moreover, the study did not account for any spatial compensation for the extra cost involved in the unit per body weight scenario. According to Bhatta (2013), the fair pricing per weight would come with extra space for overweight passengers, who would then not disturb their seat neighbors by taking up space beyond their own seat. As adjustable seat size is not yet available on airplanes, this issue was not investigated in this study, but it could add an interesting element for future research. The data collection was undertaken during the COVID-19 pandemic period. This may have affected respondents whose current thoughts and priorities may not be directed to booking air flights. Overall, while the number of studies on ethics in tourism is expanding, there are still many opportunities for further investigation, especially when paired with other relevant concepts such as sustainability.

ACKNOWLEDGMENTS

This research is supported by a grant funded by the Hong Kong Polytechnic University (ZJLU). Open access publishing facilitated by James Cook University, as part of the Wiley - James Cook University agreement via the Council of Australian University Librarians.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ORCID

Denis Tolkach https://orcid.org/0000-0002-8820-7764
Stephen Pratt https://orcid.org/0000-0002-6550-132X
Matias Thuen Jørgensen https://orcid.org/0000-0002-6202-1654

REFERENCES

Ackert, S. (2018). *Aircraft payload-range analysis for financiers*. Aircraft Monitor. Retrieved from http://www.aircraftmonitor.com/publications.html

Baskas, H. (2018). Why U.S. airlines are raising their baggage fees. Retrieved from https://www.travelandleisure.com/travel-news/airline-baggage-fees-american-delta-united-jetblue-air-canada-westjet

Bhatta, B. P. (2013). Pay-as-you-weigh pricing of an air ticket: Economics and major issues for discussions and investigations. *Journal of Revenue and Pricing Management*, *12*(2), 103–119.

Bostrom, N., & Ord, T. (2006). The reversal test: Eliminating status quo bias in applied ethics. *Ethics*, *116*(4), 656–679.

Canadian Transportation Agency. (2019). Highlights of one-person-one-fare policy decision. Retrieved from https://otc-cta.gc.ca/eng/highlights-one-person-one-fare-policy-decision

CDC. (2021). About adult BMI. Retrieved from https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html

CDC. (2022). Adult obesity facts. Retrieved from https://www.cdc.gov/obesity/data/adult.html

Chen, F. Y., Hsu, P. Y., & Lin, T. W. (2011). Air travelers' environmental consciousness: A preliminary investigation in Taiwan. *International Journal of Business and Management*, *6*(12), 78.

Clatworthy, B. (2024). This airline is now weighing passengers — But why? Retrieved from https://www.nationalgeographic.com/travel/article/should-airlines-be-weighing-passengers

Dahal, K., Brynolf, S., Xisto, C., Hansson, J., Grahn, M., Grönstedt, T., & Lehtveer, M. (2021). Techno-economic review of alternative fuels and propulsion systems for the aviation sector. *Renewable and Sustainable Energy Reviews*, *151*, 111564.

Dardanoni, V., & Guerriero, C. (2021). Young people's willingness to pay for environmental protection. *Ecological Economics*, *179*, 106853.

Deloitte. (2021). Shifting sands: Are consumers still embracing sustainability? Changes and key findings in sustainability and consumer behaviour in 2021. Retrieved from https://www2.deloitte.com/uk/en/pages/consumer-business/articles/sustainable-consumer.html

Dunlap, R. E., & Van Liere, K. D. (1978). The "new environmental paradigm". *The Journal of Environmental Education*, *9*(4), 10–19.

Dunlap, R. E. V. L., Liere, K. V., Mertig, A., & Jones, R. E. (2000). Measuring endorsement of the new ecological paradigm: A revised NEP scale. *Journal of Social Issues*, *56*(3), 425–442.

Eidelman, S., & Crandall, C. S. (2012). Bias in favor of the status quo. *Social and Personality Psychology Compass*, *6*(3), 270–281.

El Haffar, G., Durif, F., & Dubé, L. (2020). Towards closing the attitude-intention-behavior gap in green consumption: A narrative review of the literature and an overview of future research directions. *Journal of Cleaner Production*, *275*, 122556.

FAA. (2019). Advisory circular 120-27F, subject: Aircraft weight and balance control. May 6, 2019. Retrieved from https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_120-27F.pdf

Fennell, D. A. (2019). Sustainability ethics in tourism: The imperative next imperative. *Tourism Recreation Research*, *44*(1), 117–130.

Fennell, D. A., & Malloy, D. C. (1999). Measuring the ethical nature of tourism operators. *Annals of Tourism Research*, *26*(4), 928–943.

Fisher, C., Bashyal, S., & Bachman, B. (2012). Demographic impacts on environmentally friendly purchase behaviors. *Journal of Targeting, Measurement and Analysis for Marketing*, *20*(3), 172–184.

Garcia, M. (2024). Despite backlash, Here's why airlines need to weigh passengers. Retrieved from https://www.forbes.com/sites/marisagarcia/2024/02/11/despite-backlash-heres-why-airlines-need-to-weigh-passengers/?sh=5f07623e1bfa

Grewe, V., Rao, A. G., Grönstedt, T., Xisto, C., Linke, F., Melkert, J., Middel, J., Ohlenforst, B., Blakey, S., Christie, S., Matthes, S., & Dahlmann, K. (2021). Evaluating the climate impact of aviation emission scenarios towards the Paris agreement including COVID-19 effects. *Nature Communications*, *12*(1), 1–10.

Gulliver. (2016). An American airline wins the right to weigh passengers on its Samoan route. Retrieved from https://www.economist.com/gulliver/2016/10/21/an-american-airline-wins-the-right-to-weigh-passengers-on-its-samoan-route

Hardingham-Gill, T. (2023). 'We're paying twice for the same experience': Plus-size travelers hit out at 'discriminatory' airline seat policies. Retreived from https://edition.cnn.com/travel/article/plus-size-travelers-slam-airline-seat-policies/index.html

Hawcroft, L. J., & Milfont, T. L. (2010). The use (and abuse) of the new environmental paradigm scale over the last 30 years: A meta-analysis. *Journal of Environmental Psychology*, *30*(2), 143–158.

Hewitt, E. (2019). Airline passenger of size policies: Will you be forced to buy an extra seat? Retrieved from https://www.smartertravel.com/airline-obesity-policies/

Holden, A. (2019). Environmental ethics for tourism-the state of the art. *Tourism Review*, *74*(3), 694–703.

Hudson, S. (2007). To go or not to go? Ethical perspectives on tourism in an 'outpost of tyranny'. *Journal of Business Ethics*, *76*(4), 385–396.

Hunter, M. (2013). Pay-as-you-weigh airfares the 'next step'. Retrieved from https://edition.cnn.com/2013/04/02/travel/samoa-air-fare-by-weight/index.html

IATA. (2021). 20 year passenger forecast. Retrieved from https://www.iata.org/en/publications/store/20-year-passenger-forecast/#tab-3

IATA. (2022). IATA carbon offset program. Frequently Asked Questions. Retrieved from https://www.iata.org/contentassets/922ebc4cbcd24c4d9fd55933e7070947/icop_faq_general-for-airline-participants.pdf

ICAO. (n.d.). The world of air transport in 2019. Retrieved from https://www.icao.int/annual-report-2019/Pages/the-world-of-air-transport-in-2019.aspx

IdeaWorksCompany. (2018). 2018 top 10 airline ancillary revenue rankings. Retrieved from https://www.ideaworkscompany.com/wp-content/uploads/2020/04/2018-Top-10-Airline-Ancillary-Revenue-Rankings.pdf

Jamal, T., & Higham, J. (2021). Justice and ethics: Towards a new platform for tourism and sustainability. *Journal of Sustainable Tourism*, *29*(2–3), 143–157.

Jet, J. (2019). Emirates airlines reduces baggage allowance for economy ticket fliers. Retrieved from https://www.forbes.com/sites/johnnyjet/2019/02/01/emirates-airlines-reduces-baggage-allowance-for-economy-ticket-fliers/#191b9381871e https://www.forbes.com/sites/johnnyjet/2019/02/01/emirates-airlines-reduces-baggage-allowance-for-economy-ticket-fliers/#191b9381871e

Kroesen, M. (2013). Exploring people's viewpoints on air travel and climate change: Understanding inconsistencies. *Journal of Sustainable Tourism*, *21*(2), 271–290.

Le Quéré, C., Jackson, R. B., Jones, M. W., Smith, A. J., Abernethy, S., Andrew, R. M., De-Gol, A. J., Willis, D. R., Shan, Y., Canadell, J. G., Friedlingstein, P., Creutzig, F., & Peters, G. P. (2020). Temporary reduction in daily global CO 2 emissions during the COVID-19 forced confinement. *Nature Climate Change*, *10*(7), 647–653.

Marcus, L. (2020). Are fat fliers being discriminated against by airlines? https://edition.cnn.com/travel/article/body-size-airplane-seats-intl-hnk/index.html

McDonald, S., Oates, C. J., Thyne, M., Timmis, A. J., & Carlile, C. (2015). Flying in the face of environmental concern: Why green consumers continue to fly. *Journal of Marketing Management*, *31*(13–14), 1503–1528.

McKercher, B. (2015). Tourism: The quest for the selfish. In T. V. Singh (Ed.), *Challenges in tourism research* (pp. 87–96). Channel View Publications.

Meatchi, S., Camus, S., & Lecointre-Erickson, D. (2021). Perceived unfairness of revenue management pricing: Developing a measurement scale in the context of hospitality. *International Journal of Contemporary Hospitality Management*, *33*, 3157–3176. https://doi.org/10.1108/IJCHM-11-2020-1344

Melis, D. J., Silva, J. M., & Yeun, R. C. (2018). Impact of biometric and anthropometric characteristics of passengers on aircraft safety and performance. *Transport Reviews*, *38*(5), 602–624.

Moscardo, G., & Murphy, L. (2014). There is no such thing as sustainable tourism: Re-conceptualizing tourism as a tool for sustainability. *Sustainability*, *6*(5), 2538–2561.

Mudrack, P. E., & Mason, E. S. (2013). Ethical judgments: What do we know, where do we go? *Journal of Business Ethics*, *115*(3), 575–597.

Mufti, R. R. (2019). Airline baggage fee policy faces resistance. Retrieved from https://www.thejakartapost.com/news/2019/02/06/airline-baggage-fee-policy-faces-resistance.html

Pearce, P. L. (Ed.). (2019). *Tourist behaviour: The essential companion*. Edward Elgar Publishing.

Pratt, S., & Tolkach, D. (2022). Stupidity in tourism. *Tourism Recreation Research*, *47*(1), 3–16.

Quintelier, E., (2014). The influence of the Big 5 personality traits on young people's political consumer behavior. *Young Consumers*, *15*(4), 342–352.

Reidenbach, R. E., & Robin, D. P. (1988). Some initial steps toward improving the measurement of ethical evaluations of marketing activities. *Journal of Business Ethics*, *7*(11), 871–879.

Ritchie, B. W., Kemperman, A., & Dolnicar, S. (2021). Which types of product attributes lead to aviation voluntary carbon offsetting among air passengers? *Tourism Management*, *85*, 104276.

Ritov, I., & Baron, J. (1992). Status-quo and omission biases. *Journal of Risk and Uncertainty*, *5*(1), 49–61.

Sampson, H. (2021). Will a passenger weight check be part of the pre-flight experience? No way, airlines say. Retrieved from https://www.washingtonpost.com/travel/2021/06/17/airline-weight-passenger-faa/

Settembre, J. (2021). Airlines could soon start weighing passengers before flights. Retrieved from https://www.foxbusiness.com/lifestyle/airlines-could-soon-start-weighing-passengers-before-flights

Sheppard, V. (2010). Exploring the ethical standards of Alaska cruise ship tourists and the role they inadvertently play in the unsustainable practices of the cruise ship industry. In *Cruise tourism in polar regions* (pp. 101–118). Routledge.

Spinks, R. (2017). Male business class passengers are a heavier burden on airlines than females. Retrieved from https://qz.com/quartzy/1118621/the-reason-finnair-is-weighing-its-passengers-is-not-what-you-think/

Steinegger, R. (2017). Fuel economy for aircraft operation as a function of weight and distance. Retrieved from https://doi.org/10.21256/zhaw-3466

The World Bank. (2023). CO_2 Emissions (metric tons per capita) – United States. Retrieved from https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=US

Tolkach, D., Pratt, S., & Zeng, C. Y. (2017). Ethics of Chinese & western tourists in Hong Kong. *Annals of Tourism Research*, *63*, 83–96.

Visontay, E. (2023). Larger-bodied airline passengers forced to pay for two seats prompts call for clearer anti-discrimination laws. Retrieved from https://www.theguardian.com/business/2023/apr/23/larger-bodied-airline-passengers-forced-to-pay-for-two-seats-prompts-calls-for-clearer-anti-discrimination-laws

Webber, T. (2012). Why people with heavier luggage should pay more to fly. Retrieved from https://www.smh.com.au/business/why-heavier-people-should-pay-more-to-fly-20120111-1puti.html

WHO. (2021). Obesity and overweight. Retrieved from https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight

Winter, C. (2020). A review of animal ethics in tourism: Launching the annals of tourism research curated collection on animal ethics in tourism. *Annals of Tourism Research*, *84*, 102989.

Wolfe, J. D., Baker, E. H., & Scarinci, I. C. (2019). Wealth and obesity among US adults entering midlife. *Obesity*, *27*(12), 2067–2075.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Tolkach, D., Pratt, S., Masiero, L., Jørgensen, M. T., Zoltan, J., Schuckert, M., & Chon, K. (2024). Self-interest, ethical and environmental considerations of air traveler weight policies. *International Journal of Tourism Research*, *26*(4), e2691. https://doi.org/10.1002/jtr.2691