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AIR TRANSPORT AND MOOD IN YOUNGER GENERATIONS: The Role of Travel Significance and COVID-19

ABSTRACT

The purpose of this paper is to investigate the relationship between mood and air travel choices, considering the role of travel significance and the influence that COVID-19 may have on younger generations' choices. Using a mixed-methods sequential exploratory design, a sample of 1,111 Italian respondents, belonging to younger generations is investigated. The data are analysed using a quantile regression with group effects considering attitudes towards COVID-19. The study demonstrates that there is a positive and significant relationship between mood and the number of journeys by air to destinations outside Europe, highlighting the positive moderating effect of the air travel experience and the negative moderating effect of COVID-19. This may have important implications for air transport managers interested in luring younger people to fly in the post-COVID19 era.

Keywords: tourism, air transport, travel experience, COVID-19, young generation, financial impact.

1. INTRODUCTION

Choices made by different age generations play a major role in air transport and tourism (e.g. Giachino, Truant, & Bonadonna, 2019; Liu, Wu, & Li, 2019; OECD, 2018; Rita, Brochado, & Dimova, 2018). Understanding the consumer behaviour of younger generations is important because of their increasingly important relative size and purchasing power (Fry, 2020). As a matter of classification, the so-called younger generations include Millennials (i.e., Generation Y) and Generation Z (GenZ), while Baby Boomers and Generation X (GenX) are now considered as part of the older generations. Baby Boomers include people born between 1946 and 1964; GenX comprises people born between 1965 and 1980; Generation Y (GenY) or Millennials consists of people born between 1981 and 1996, while GenZ relates to people born between 1997 and 2010 (McKinsey & Company, 2018).

Younger generations represent a cut with the past as they are the first digital natives; they consider it fundamental to live new experiences by travelling (Whitmore, 2019) and they are influenced in their choices by their different approach to living their lives (McKinsey & Company, 2018; Whitmore, 2019). In addition to the specific behaviours and attitudes of a generation, destination choice can be influenced by personal attitudes towards flight (Fleischer, Tchetchik, & Toledo, 2015; Molin, Blangé, Cats, & Chorus, 2017) and the perception of risk in visiting a country or region (Sharifpour, Walters, & Ritchie, 2014).

If the perception of risk includes the political and economic situation of a country or the prevailing health conditions (Richter, 2003; Sönmez & Graefe, 1998), the attitude towards travelling can be affected by the sense of safety or tranquillity in air transportation (Molin, Blangé, Cats, & Chorus, 2017). In fact, it is quite common that people suffer anxiety when they have to fly (Fleischer, Tchetchik, & Toledo, 2015), but somehow the perception of risk and the anxiety can be moderated by the experience gained by travelling (Sharifpour, Walters, & Ritchie, 2014).

Today, the tourism sector is experiencing very challenging times due to the COVID-19 pandemic (OECD, 2020). This hit almost all countries around the world, and the subsequent restrictions imposed on air transportation, including a ban on flying, gave rise to many financial problems in companies of the sector looking for new solutions. Among others, ultra long-haul point-to-point services were introduced; such hub-bypassing direct connections were deemed safer from a COVID-19 perspective as they avoided busy hubs where social distancing may prove more difficult to observe (Bauer, Bloch & Merkert, 2020).

At present, even with relaxed travel restrictions and increasingly streamlined processes, many people are still reluctant to undertake long-haul flights and travel (IATA, 2019; Sharma & Nicolau, 2020; UNWTO, 2020; Zheng, Luo & Ritchie, 2021).

Although a stream of tourism research has analysed the effects of past external shocks and particular attention has been paid to how they were managed and/or how people lived with them (e.g., Aliperti, Sandholz, Hagenlocher, Rizzi, Frey, & Garschagen, 2019; Chew & Jahari, 2014; Kuo, Chen, Tseng, Ju, & Huang, 2008; Wolff & Larsen, 2014), the effects of COVID-19 were unprecedented and require an in-depth investigation of tourists' behaviour and reactions (e.g. Zheng, Luo & Ritchie, 2021; Graham, Kremarik & Kruse, 2020; Spanaki, Papatheodorou & Pappas, 2021). Therefore, the paper focuses on the younger generations, which are fundamental for the future of the tourism sector (e.g. Liu, Wu, & Li, 2019; OECD, 2018; Rita, Brochado, & Dimova, 2018) and investigates the relationship between mood and air travel during the COVID-19 pandemic. In fact, to the best of the authors' knowledge, this is one of the first studies to investigate the relationship between mood – that includes feelings such as tranquillity, safety, relaxation, rapidity (i.e. need to arrive fast), comfort, convenience, entertainment and anxiety - and air travel to remoter destinations, considering the importance attributed to travel (i.e. the significance that travel has in people's lives) and the influence that an external event/shock (such as COVID-19) can have on the younger generations' travel choices.

First, the younger generations' attitude towards longer travel – in the specific case defined as travel outside Europe – is analysed with reference to air transportation, thus gaining more insights about the

travel experience and mood of these generations during trips. Second, the research investigates the role of COVID-19 in travel choice: essentially, the paper hypothesises that people's mood can influence the number of longer flights they take, at the same time investigating the moderating role of the air travel experience.

The study used a mixed-methods sequential exploratory design (e.g. Creswell, 1999; Edmondson & McManus, 2007; Miglietta, Battisti, Carayannis & Salvi, 2018; Battisti, Bollani, Miglietta & Salvi, 2020). More specifically, we first conducted a focus group analysis with nine university students to understand their attitudes towards travel and flying under normal conditions and gain more insights on how they experienced the COVID-19 period. Building on the literature and the information gathered from the focus group analysis and to test the research hypotheses, we collected data through a questionnaire with 1,111 respondents representing Millennials and GenZ university students in the Northwest of Italy. Finally, following the methodology proposed recently by Davino & Vistocco (2018), we implemented a quantile regression analysis considering the presence of group effects (afraid or not afraid of COVID-19).

This research contributes to the existing literature in multiple ways. First, we examine the behaviour of people in tourism, opening new insights into the young generations and their relationship with air travel which, until today, is an under-investigated topic. Second, we answer the call for research about people's behaviour in tourism during a pandemic (Li et al., 2020), giving evidence about the impact of COVID-19 on the younger generations' plans to travel.

The paper is structured as follows. In the following section the theoretical basis and hypotheses are presented. The third section is dedicated to the methodology and the discussion of the sample and variables. The fourth section analyses and discusses the findings. Finally, the last section concludes by highlighting the implications of the study and its relevance from a theoretical and managerial point of view.

2. THEORETICAL BACKGROUND AND HYPOTHESES

According to a recent study conducted by the Pew Research Center (Fry, 2020), the US Census Bureau projects that Millennials (72.1 million) have now surpassed the Baby Boomers (71.6 million) that for a long time represented the largest living adult cohort in the United States.

The analysis of generational cohorts is relevant because it can underline differences in people's behaviour. For example, Millennials were the first to plan their travel using online channels, looking at other travellers' opinions and feedback (Erdeji & Dragin, 2017) and this had an influence on their purchase intentions (Park & Nicolau, 2015). For younger generations, travel is fundamental, and it seems that the destination is not as important as the experience, and the desire to travel as much as possible (Whitmore, 2019). Moreover, while Baby Boomers prefer to spend quality time with relatives during a vacation, Millennials are more inclined to look for adventure, and this is confirmed by their preference for long-haul travel and living like the locals (Gelfeld, 2019).

Destination choice is important and can be influenced by several elements, such as people's risk perception in terms of safety and tranquillity (Sharifpour, Walters, & Ritchie, 2014), and the level of air fare to reach a destination (O'Connell & Williams, 2005; Papatheodorou, 2021). The perception of risk can be considered from different perspectives, such as the destination itself, its political situation (e.g. Richter, 2003; Sharifpour, Walters, & Ritchie, 2014; Sönmez & Graefe, 1998) and the prevailing health conditions (Richter, 2003); but it also can be influenced by people's travel experiences or the number of journeys they have made (Sharifpour, Walters, & Ritchie, 2014). Another influential aspect in destination choice is the means of transport used. Most people choose to travel by air because it is faster and safer; often it is the only way to reach distant destinations, and cheap tickets can be found (Grigolon, Kemperman, & Timmermans, 2012; IATA, 2019; O'Connell & Williams, 2005). However, travel by air causes different reactions to people and affects their sense of safety when they have to fly (Molin, Blangé, Cats, & Chorus, 2017). Air travel is considered one

of the safest modes of transport and the sector continues to register improvements in its safety performance and standards (IATA, 2019). Nonetheless, some scholars identify that people generally suffer from flying anxiety based on the information they have about airlines (Fleischer, Tchetchik, & Toledo, 2015) perceiving the risk of air travel as high (Reichel, Fuchs, & Uriely, 2007).

Flying anxiety has been treated from a cognitive and psychological point of view (e.g. Allsop & Gray, 2014; Kim et al., 2008; Kraaij, Garnefski, & Van Gerwen, 2003). Perceived risk or anxiety can lead tourists to not consider a specific region, city or country, but this can be mitigated by the experiences they had in the past (Sharifpour, Walters, & Ritchie, 2014). Another relevant aspect is the fare and the convenience of choosing a low-cost or a full-cost carrier when air travel is required (O'Connell & Williams, 2005). From this perspective, there are some relevant implications to consider: the effect of traveller's income; the benefits, such as entertainment and comfort during the flight; and/or the opportunity to reach the destination sooner (no stopover) (O'Connell & Williams, 2005).

Since the general mood during air travel (i.e., safety, anxiety, rapidity, convenience, tranquillity, relaxation, entertainment, comfort) can influence the choice of certain destinations, it is important to understand how the younger generations feel when travelling and flying. Based on these considerations, we suggest the following two hypotheses:

Hypothesis 1: A better mood towards flying positively affects the number of longer trips (defined as trips outside Europe for Italians) - by air.

Hypothesis 2: The significance of travel to an individual positively affects the number of longer trips (defined as trips outside Europe for Italians) - by air.

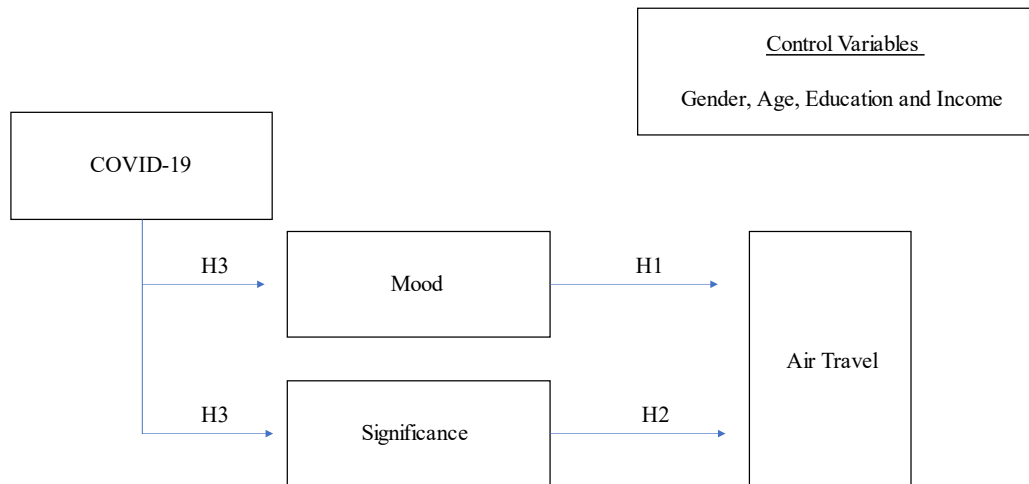
As previously noted, tourism is an important sector for many countries, and the shock generated by the COVID-19 pandemic has direct consequences on the entire economy (OECD, 2020). The characteristics of the COVID-19 pandemic are distinctive and unheralded. Specifically, the tourism industry has been seriously affected by COVID-19 and its consequences (Qiu, Park, Li, & Song, 2020), such as the travel restrictions introduced by many countries (European Commission, 2020). Previous studies have shown a significant drop in the demand for hotels, airlines, cruise lines and car rentals during the COVID-19 pandemic, opening the possibility of a serious crisis (Sharma & Nicolau, 2020). Besides the economic consequences, some studies have underlined the importance of investigating the influence of the pandemic on tourists and suggested further research on this topic (Li, Nguyen & Coca-Stefaniak, 2020). Li et al. (2020) demonstrated that COVID-19 has already had an influence on travel behaviour, with people preferring to hire private cars rather than to use public transport, for example. Moreover, the authors found that during the pandemic period people have preferred shorter holidays over longer ones. Zheng, Luo & Ritchie (2021) put in evidence that Chinese after the pandemic adopted a more protective travel behaviour.

Based on these considerations, we suggest the following last hypothesis:

Hypothesis 3: COVID-19 has a moderating effect on the mood and significance of air travel

In essence, the authors analyse the relationship between mood, significance and air travel to long-haul destinations taking into consideration the impact of an external event, such as COVID-19, on people's choices (see Figure 1).

Figure 1. Conceptual model and hypotheses



Source: Authors' elaboration

3. RESEARCH METHODOLOGY

3.1. Design

To better investigate the phenomenon, and deliver well-founded results, this research draws on a mixed-methods research design (e.g. Creswell, Plano Clark, Gutmann, & Hanson, 2003; Edmondson & McManus, 2007; Tashakkori & Teddlie, 1998). This has become popular in the social sciences and can be regarded as an important and standalone investigation design (Terrell, 2012) in different fields, such as tourism (e.g. Dayour, Park, & Kimbu, 2019; Gannon, Taheri, & Olya, 2019; Kakoudakis, McCabe, & Story, 2017; Song, Xie, Park, & Chen, 2020). It involves the collection and analysis of both qualitative and / or quantitative data in single-round research in which the data are composed sequentially and/or include the consolidation of the data at one or more stages in the research process (Creswell et al., 2003). The use of both types of data (qualitative and quantitative) allows researchers to make generalisations from the results and to obtain a deeper view in the area of investigation (Hanson, Creswell, Clark, Petska, & Creswell, 2005).

Creswell et al. (2003) identify the six mixed-methods study designs, which comprise three sequential (explanatory, exploratory, and transformative) and three concurrent designs (triangulation, nested, and transformative). Specifically, in sequential designs, the aim is to have one phase of the mixed methods study built on the others; in concurrent designs, the phases are merged so that the quantitative and qualitative results can be associated (Fetters, Curry, & Creswell, 2013).

In this analysis, we used a sequential design; implementation of the data collection was exploratory (e.g., Miglietta, Battisti, Carayannis & Salvi, 2018; Battisti, Bollani, Miglietta & Salvi, 2020). A qualitative phase was conducted through a focus group analysis to identify the main questions used in the quantitative phase (questionnaire). To test our hypotheses, we implemented quantile regression analysis, which allowed us to examine the effect of the covariates on the whole distribution of the dependent variable, considering the presence of group effects regarding attitude towards COVID-19 (afraid or not afraid of COVID-19).

3.2. Focus Group

Focus groups are frequently used across a wide range of research disciplines (Guest, Namey, & McKenna, 2017) and in specific sectors, such as tourism (e.g. Gurran, Zhang, & Shrestha, 2020; Lockyer, 2005; Tuomi, Tussyadiah, Ling, Miller, & Lee, 2020). Commonly, focus groups are used in the initial phase of research to identify items for inclusion in a questionnaire (e.g. Barbour, 2007; Morgan, 1997) and to articulate contextually appropriate questions (Dumka, Gonzales, Wood, & Formoso, 1998). In particular, focus groups allow the capture of people's attitudes and opinions with reference to a specific topic (Byers & Wilcox, 1991) and allow a better understanding of people's perceptions and approaches towards a specific phenomenon (Hines, 2000). Furthermore, focus groups allow in-depth information to be obtained that may not be acquired in one-to-one interviews (Babbie, 2011), and they afford the capacity to search a specific set of issues in a collective way (Kitzinger & Barbour, 1999). Listening to others with different knowledge allows focus group participants to interact and foster new insights and ideas not available through traditional strategies (Krueger, 2014). In this way, participants can create their own questions, frames and concepts useful for the study (Lockyer, 2005).

To reach out participants the authors contacted the central administration of the University of Turin, which has an extensive database of students belonging to different universities in the north-west of Italy. In fact, university students are typically characterized by a relatively high propensity and desire to travel considering their, usually tight, budget constraint (Stabler, Papatheodorou & Sinclair, 2010); moreover, university students of today are likely to become the leaders of their generation in the future, hence their view on air travel is of significant weight (Ballantyne, Carr & Hughes, 2005; Thrane, 2016; Gössling et al., 2019). The University of Turin central administration supported this research by sending out the authors' invitation for panel participation to the undergraduate students present in their mailing list. Eventually, the focus group comprised nine students, four females and five males aged from 21 to 26 years old. The focus group meeting took place virtually at the end of March 2020, so during the first wave of the pandemic. In particular, the first lockdown period in Italy started on the 9th of March 2020 and finished on the 3rd of May 2020: throughout this period Italy was a single red zone. The second phase of the lockdown (4th of May to 14th of June) was characterized by a gradual relaxation of the previous containment measures. From the 15th of June onwards, Italy experienced phase three: many of the imposed constraints were further relaxed as co-existence with COVID-19 became gradually accepted.

The objective of the focus group was to gain useful insights on how to build the questionnaire for the quantitative research that was undertaken later in 2020. We proceeded with generic questions about travelling and then with more specific questions about the students' reaction to negative events such as terroristic attacks and the COVID-19 pandemic. Therefore, the main elements emerging from the focus group were linked to 1) how participants used to travel; 2) their mood; and 3) how they react to different (negative) events.

All the participants showed interested in travelling and discovering new places. Under normal circumstances, almost all of them organise three to four trips per year: those organised during the summer vacation are usually the longest (at least one week) and the most distant (outside Italy and, for two of them, outside Europe). What emerged during the conversation was that students made a distinction between staying in their home country (in this case, Italy), travelling in Europe (shorter travel) and travelling outside Europe (longer travel). For the summer of 2020, they chose to organise a vacation in the home country out of necessity—that is, this year, due to COVID-19, all of them decided to stay near home. Under normal circumstances, though, the respondents usually spent their vacations in Europe with friends or, in a couple of cases, with their families. Three out of the nine went outside Europe. The main constraints are linked with their budget: the majority do not have a steady income flow, so their travel budget is low (<1000 euros).

Almost all participants declared that they feel safer and more comfortable using air transport than other modes of transport. Moreover, during flying they can relax, read a book or just chat with friends.

The only drawback of the aeroplane is the cost of the ticket: since it is rather high with respect to their budget, they try to book their flights in advance, and some of them look for cheaper stopovers. Just two of the participants felt a sense of anxiety during the flight, but they did not know the reason.

Some of the participants said that the lockdown due to the COVID-19 pandemic outbreak changed their feelings about travelling. Some of them became disoriented and scared about travelling in the near future either in or outside Europe, and they felt surprised about these feelings. The discussion led us compare some possible negative events/shocks and the consequences of those events/shocks on their feelings/choices. In particular, participants compared air travel accidents, terrorist attacks and COVID-19. Summarising the discussion, they consider an aircraft accident as something possible but highly improbable, so this does not influence their travel choice and does not change their idea about aeroplanes: this was true for the most experienced participants (seven out of nine). COVID-19 left all of them feeling vulnerable and powerless, and four out of the nine people preferred not to travel in the future and to take as few flights as possible.

Finally, the majority (seven out of nine) admitted to being worried about the economic and financial consequences that COVID-19 had on some industries that are important for Italy. They discussed possible financial initiatives to help entrepreneurs and companies, but they had limited suggestions about the most suitable measures to take. COVID-19 represents a totally new case, and they do not feel able to completely understand the consequences of the implemented financial initiatives.

3.3. Survey Questionnaire

After the focus group, data were collected using a structured questionnaire (Sarraf, Di Zio, & Cappucci, 2015) to obtain insights from people's experiences, aspirations, opinions and feelings (May, 2001). A thorough analysis of the literature shows the lack of investigation of the younger generations' mood when travelling and the effect that a negative event/shock such as COVID-19 may have on their behaviour. Based on emails sent out by the central administration of the University of Turin, the survey was conducted over approximately one month, from the end of April 2020 to the end of May 2020. Due to the COVID-19, we decided to extend the questionnaire for another fifteen days up to mid-June 2020. To ensure privacy, the authors were not given direct access to the University of Turin's email database; they were only provided with the responses. After a brief introduction of the research topic in the first part of the questionnaire in which participants were informed regarding the study's aim and ensured about their full anonymity and confidentiality about data analysis (Battisti, Alfiero, Quaglia, & Yahiaoui, 2022), the questionnaire was divided into four sections with closed-ended questions.

The first section requested some general information about the respondent, such as age, gender, education and income. The second section investigated the propensity to travel for leisure purposes with particular regard to 1) how students used to travel; 2) how they feel before/during the flight; and 3) how they react to different (negative) events/shocks (such as plane crash, terrorist attack). The third part focused on the impact of COVID-19 on travel. Finally, the fourth section of the questionnaire concentrated on the impact of COVID-19 on the tourism sector and on financial aspects/needs. Because of the single-respondent approach with regards to data gathering, we minimized common method variance by splitting the survey questions, especially the dependent and the independent variables, to eliminate the possibility - risk of rationalising the answers of the informants (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). At the end of the survey period, a total of 1,157 filled questionnaires were received. Of these, 46 were excluded because answers were incomplete or invalid. After the initial screening, 1,111 valid questionnaires were used for subsequent analysis.

3.4. Data Description and the Quantile Regression Model

Following Sharifpour, Walters, & Ritchie (2014), who examined the relationship between the level of experience of a traveller, based on the number of trips made and risk perception, the dependent variable referred to the number of journeys of longer trips, (i.e., those made outside Europe) by air. To measure the respondents' mood (our explanatory set of variables), we used the values obtained by the answers to eight different questions measured on a five-point Likert-type scale from 1 (indicating low values) to 5 (indicating high values) regarding tranquillity, safety, relaxation, rapidity, comfort, convenience, entertainment, and anxiety.

As control variables, we used age, gender, education and income, in line with prior studies (e.g. Collins & Tisdell, 2002; Qiu, Park, Li, & Song, 2020; Waqas-Awan, Rosselló-Nadal, & Santana-Gallego, 2020). The age of the respondents can have implications for the number of journeys made, as well as income and education. Moreover, those variables can also have implications for respondents' mood and risk perception. In addition, we included as moderators the significance that travel has in respondents' lives, measured through a five-point Likert-type scale from 1 (not significant at all) to 5 (very significant). Finally, we considered the influence of the cost of the air ticket on their budget, whereas we examined the effects of COVID-19 by asking them whether they were afraid COVID-19 (Qiu, Park, Li, & Song, 2020). Table 1 provides a detailed description of the variables included in this paper.

Standard linear regression uncovers the link among a set of regressors and the dependent (outcome) variable according to the conditional mean function $E(y/x)$. However, this simply offers a partial view of the relationship; to overcome this problem and examine the connection at dissimilar points in the conditional distribution of the dependent variable, it was decided to use quantile regression, developed by Koenker & Bassett (1978). Quantile regression is essentially an expansion of the traditional least squares assessment of conditional mean models to the estimation of a set of models for different conditional quantile functions (Koenker & Hallock, 2001). Notably, quantile regression is used by various scholars in the tourism and travel literature, including Massidda, Piras, & Seetaram (2020) and Rudkin & Sharma (2017).

The quantile $\theta \in (0, 1)$ is the variable y , which splits the data into proportions θ below and $1-\theta$ above, $F(y_\theta) = \theta$ and $y_\theta = F^{-1}(\theta)$, where $\theta = 0.5$ is the median. The quantile regression estimator for quantile θ minimises the following objective function,

$$Q(\beta_\theta) = \sum_{i: y_i \geq x_i' \beta} \theta |y_i - x_i' \beta_\theta| + \sum_{i: y_i < x_i' \beta} (1 - \theta) |y_i - x_i' \beta_\theta| \quad (1)$$

where the dependent variable y_i is scalar and measures the number of longer trips; x_i is a $p \times 1$ vector of longer trip determinants (relevance of travel, aspects of mood including tranquillity, safety, relaxation, rapidity, comfort, convenience, entertainment and anxiety, influence of cost of the air ticket on budget and demographics— gender, age, education and income); and β is a $p \times 1$ vector of unknown parameters for $i = 1, 2, \dots, n$.

Apart from the fact that quantile regression allows us to consider the impact of the covariates on the entire distribution of y , an additional advantage is that it is more robust to non-normal errors and outliers, and invariant to monotonic transformations. In this study, we consider a quantile regression analysis considering the presence of group effects (afraid or not afraid of COVID-19) following the methodology proposed recently by Davino & Vistocco (2018).

As previously noted, we consider the dependent variable vector y_n , measuring the number of longer trips, and the regressors matrix $X_{n \times p}$, where n denotes the number of units or individuals and p the number of regressors. Let the data be portioned in m strata or groups. In our case, the strata indicate the sample of individuals who are afraid or not afraid of COVID-19. Thus, n_g is considered

as the number of units in each group g , whereas the total sample size can be noted as $n = \sum_{g=1}^m n_g$. The estimated linear regression for group g considering different models is given as

$$y^g = X^g \beta^g + e^g \quad (2)$$

Similarly, the quantile regression for a fixed quantile θ and group g is expressed as,

$$Q_{\theta}^g(y^g/X^g) = X^g \beta^g(\theta) + e^g \quad (3)$$

Table 1. Description of variables and sources

Variables	Type	Description	Source
Travel	Dependent variable	Number of longer trips – outside Europe	Sharifpour et al. (2014)
COVID-19	Group variable	Extraordinary event, novel coronavirus disease 2019	Qiu et al. (2020)
Significance	Explanatory variable	The importance of travel in life	Sharifpour et al. (2014)
Mood	Explanatory set of variables	Aspects of mood including tranquillity, safety, relaxation, rapidity, comfort, convenience, entertainment and anxiety	Fleischer et al. (2015); O'Connell & Williams (2005); Sharifpour et al. (2014)
Influence of cost of air ticket on budget	Explanatory variable	Students' choices are mainly driven by costs paid for air transportation	Grigolon et al. (2012)
Gender	Control variable	Male – Female	Collins & Tisdell (2002); Qiu et al. (2020)
Age	Control variable	GenZ (18–25) and Millennials (26–40)	Qiu et al. (2020)
Education	Control variable	Bachelor's degree, Master's degree, others	Qiu et al. (2020)
Income	Control variable	Different levels of income	O'Connell & Williams (2005); Qiu et al. (2020); Waqas-Awan et al. (2020)

Source: Authors' elaboration

Davino & Vistocco (2018) proposed a methodology which uncovers the heterogeneity between different groups based on a single estimation process. The methodology includes first a global estimation, then recognition of the best model for each individual/unit, followed by recognition of the best model for each set and, finally, partial estimation (Davino & Vistocco, 2018). In particular, the first step, which includes the global estimation in the quantile regression model, is estimated by excluding the group variable (afraid or not COVID-19):

$$Q_{\theta}(y/X) = X\beta(\theta) + e \quad (4)$$

In the second step, the best model for each individual/unit i is uncovered based on the quantile able to estimate better the response variable:

$$\theta_i: \operatorname{argmin}_{\theta=1,\dots,k} |y_i - \hat{y}_i(\theta)| \quad (5)$$

where k is the number of the estimated conditional quantiles. The third and final step of the methodology includes dividing the units based on the group variable; the most appropriate model for each group is uncovered by combining the quantiles allocated in the previous step to each unit connected to the same group. Finally, a quantile regression is estimated taking into account the whole sample, but the estimation is implemented separately for each group in the quantile allocated as the best quantile in the third step.

4. EMPIRICAL ANALYSIS AND DISCUSSION

4.1. Descriptive Statistics and Preliminary Analyses

As previously stated, we obtained 1,111 valid answers from university students. Based on Table 2, the majority of the respondents (85%) belong to GenZ (18–25 years old), while the remaining 15 per cent belong to the GenY or Millennial generation (26–40 years old). Since the questionnaire was sent to university students, the concentration in the first generational cohort, GenZ, was expected. Looking at the gender of respondents, we noticed a preponderance of females, representing 74 per cent, while males comprise 26 per cent of the total number of respondents.

We asked for information about their educational path and income to better understand their position and ability to travel. In line with the average age of the sample, 75 per cent of respondents had a Bachelor's degree while the remaining 25 per cent had a Master's degree or higher (e.g., Ph.D. candidate, executive MBA). Looking at the income, some of them were working students: 55 per cent declared an income lower than 15,000 euros per year; 18 per cent claimed between 15,000 and 28,000 euros per year; 17 per cent had an income ranging between 28,000 and 55,000 euros per year; while the remaining 10 per cent had an income of more than 55,000 euros per year.

In addition, we analyse some elements regarding the travel behaviour of the respondents: we asked information about their travel budget, the weight of the flight's ticket on the total budget, and their favourite mode of transport (if an option was possible).

Of the respondents, 86 per cent had a budget equal or lower than 1,000 euros, while the remaining 14 per cent had a budget over 1,001 euros. Air transport was the favourite mode of transport chosen by respondents (65%), followed by train (17%) and car (15%). However, the cost of the air ticket seems to have a high impact on the travel budget travel, since in 72 per cent of cases it accounted for 11–50 per cent of the budget, and in the 23 per cent of cases it accounted for more than 51 per cent of the budget.

Table 2. Frequency distribution table (n= 1,111)

	Description	Freq	Percent
Gender	Male	289	26.0
	Female	822	74.0
Age	18–25	948	85.3
	26–40	163	14.7
Education	Bachelor's degree	832	74.9
	Master's degree	261	23.5
	Other	18	1.6
Income	0–15,000	612	55.1
	15,000–28,000	200	18.0
	28,001–55,000	188	16.9
	55,001–75,000	54	4.9
	>75,001	57	5.1
Budget for travel	<500	496	44.6
	501–1,000	458	41.2
	1,001–1,500	103	9.3
	1,501–2,000	33	3.0
	>2,001	21	1.9
Air ticket/Budget	<10%	57	5.1
	11–20%	188	16.9
	21–30%	209	18.8
	31–40%	205	18.5
	41–50%	203	18.3
	>51%	249	22.4
Modes of transport	Aeroplane	720	64.8
	Car	163	14.7
	Bus	33	3.0
	Train	184	16.6
	Cruise ship	9	0.8
	Motorcycle	2	0.2

Source: Authors' elaboration

In Table 3 we present the descriptive statistics for the dependent variable and for some of the key variables in our analysis: significance of travel, aspects of mood and attitude towards COVID-19. According to this table, the average number of longer trips (outside Europe) for this sample is around 1.5, whereas travelling plays a significant role in young generations, since they assign a mean value of 4.2. Furthermore, measuring different aspects of their mood for travelling, we obtained an average around 3 in most of cases. We considered the effect of COVID-19 by asking them if they were afraid (1) or not (0) of COVID-19, with the majority expressing fear towards COVID-19 (average 0.634).

Finally, to check for the possibility that our sample in certain characteristics is underrepresented or overrepresented inducing bias, we have conducted two robustness exercises: (i) by implementing a Chi-square test (Snedecor & Cochran, 1989), we found no differences across the different population categories and (ii) by estimating the models using post-stratification weights we did not obtain different results.

Table 3. Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
Longer travel – outside Europe	1.484248	2.175514	0	12
Significance of travel	4.272727	0.863871	1	5
Tranquillity	3.361836	1.08907	1	5
Safety	3.39784	1.018812	1	5
Relaxation	3.341134	1.132529	1	5
Rapidity	3.432043	1.088275	1	5
Comfort	3.405041	1.020392	1	5
Convenience	3.281728	1.177422	1	5
Entertainment	3.219622	1.155641	1	5
Anxiety	2.740774	1.226341	1	5
Afraid of COVID-19	0.634564	0.481769	0	1

Source: Authors' elaboration

4.2. Quantile vs OLS Regression and Quantile Regression Analysis with Group Effects

Following the four-stage approach proposed by Davino & Vistocco (2018), we first estimate the global model without considering the group variable (COVID-19); we then identify the best model for each unit/individual, followed by detection of the best model for each group; finally, we estimate the quantile model partially based on the best quantile for each group using the total sample. Table 4 presents the global estimation for $\theta = 0.5$ in comparison with typical ordinary least squares (OLS).

Table 4. Quantile and OLS regressions

Variable	Quantile for $\theta = 0.5$			OLS		
	Coefficient	Std. Error		Coefficient	Std. Error	
Significance of travel	0.322936	0.046202	***	0.6000769	0.0655507	***
Tranquillity	0.033188	0.073303		0.0207162	0.1151329	
Safety	0.068637	0.088143		0.2395347	0.1093606	**
Relaxation	-0.07171	0.053234		-0.062055	0.0841551	
Rapidity	0.012087	0.056003		0.0548001	0.0813919	
Comfort	-0.14559	0.06696	**	-0.2721349	0.101393	***
Convenience	0.005714	0.039584		-0.0346559	0.0711639	
Entertainment	0.078306	0.052222		0.0228163	0.062681	
Anxiety	-0.12807	0.043354	***	-0.167979	0.0549028	***
Impact of cost of air ticket on budget	0.000266	0.02197		0.0132464	0.0401878	
Gender	0.253447	0.141172	*	0.159135	0.1494776	
Age	0.122511	0.145231		0.1073248	0.1815885	
Education	0.060645	0.102478		0.166959	0.1150466	
Income	0.149714	0.056213	***	0.1094005	0.0594519	*
Constant	-0.51767	0.362637		-0.9127358	0.4074511	

Source: Authors' elaboration

According to the results, relevance, comfort, anxiety and income play a significant role in longer travel (outside Europe) in both models. However, it is noticeable that the coefficients - hence, the effect - of each variable are different in the two models. In addition, safety plays a significant role only in the OLS model, and gender only in the quantile regression. Hence, it can be stated that the typical linear regression provides restricted information regarding the effect of each variable to long distance travel decisions.

In Table 5, we present the last step of the quantile regression model, with group effects, which involves estimating the quantile model based on the best quantile for each group using the total sample, after identifying the best quantile for each unit i and dividing the units based on the group variable. Notably, the best quantile for those who answered that they were afraid of COVID-19 is $\theta = 0.4$ and for those who were not afraid of COVID-19 is $\theta = 0.60$.

Table 5. Quantile regression with group effects

Variable	Afraid of COVID-19			Not afraid of COVID-19		
	Coefficient	Std. Error		Coefficient	Std. Error	
Significance of travel	0.3229	0.0499	***	0.406118	0.068596	***
Tranquillity	0.0332	0.0770		0.134682	0.093814	
Safety	0.0686	0.0117	***	0.123653	0.123420	
Relaxation	-0.0717	0.0829		-0.167347	0.072859	**
Rapidity	0.0121	0.0038	***	0.060228	0.080890	
Comfort	-0.1456	0.0606	**	-0.239297	0.099824	**
Convenience	0.0057	0.0034	*	0.002682	0.073742	
Entertainment	0.0783	0.0517		0.070234	0.083402	
Anxiety	-0.1281	0.0392	***	-0.191505	0.068611	***
Impact of cost of air ticket on budget	0.0003	0.0207		-0.004398	0.040783	
Gender	0.2534	0.1216	**	0.337629	0.183590	*
Age	0.1225	0.1202		0.139118	0.191081	
Education	0.0606	0.0971		0.141791	0.024998	***
Income	0.1497	0.0561	***	0.159638	0.065161	**
Constant	-0.5177	0.3147	*	-0.409570	0.514350	

Source: Authors' elaboration

The air travel mood can be influenced by several elements interpreted in different ways by tourists. Of course, the sense of safety (Molin, Blangé, Cats, & Chorus, 2017) can influence the choices made by people, as well as their risk perception of visiting a specific country (Sharifpour, Walters, & Ritchie, 2014) or the presence of external events such as COVID-19 (Li, Nguyen & Coca-Stefaniak, 2020; Sharma & Nicolau, 2020; Zheng, Luo & Ritchie, 2021).

According to the results obtained through the quantile regression with group effects, there are significant differences with respect to the selected variables among those who are afraid and those not afraid of COVID-19; nonetheless, there are also some points in common.

From the analysis, it emerged that significance of travel (i.e., the importance that travel has in people's lives), comfort, anxiety, gender, and income play a significant role in longer distance travel outside Europe in both groups (afraid of COVID-19 and not afraid of COVID-19). This confirms how important travel is for younger generations (Whitmore, 2019) and how the experience gained during travelling can influence their behaviour (Sharifpour, Walters, & Ritchie, 2014) also regarding the convenience of the chosen trips; the latter may be related to the young age of the respondents and to their relatively low income (O'Connell & Williams, 2005).

However, it is possible to highlight some interesting peculiarities of the two groups. As discussed in the literature, people's reaction to COVID-19 can influence their behaviour linked to tourism (Li, Nguyen & Coca-Stefaniak, 2020; Sharma & Nicolau, 2020; Zheng, Luo & Ritchie, 2021), and this will affect the entire tourism sector (Qiu, Park, Li, & Song, 2020; UNWTO, 2020).

In fact, the group of people that reported to be afraid of COVID-19 attributed higher value to safety, rapidity, and convenience. This means that an external event/shock can influence the choices made by these people, forcing them to look for ways to move perceived as faster and safer.

On the other hand, the group of people claiming not to be afraid of COVID-19 exhibited higher coefficients for relaxation and education. In this case, we can assume that the higher level of education may influence how people perceive and manage their reaction vis-à-vis an external event/shock as their attitude towards travel is more relaxed.

It seems that people perceiving COVID-19 as an external event/shock with a negative impact are more conservative in their way of travelling (e.g. Aliperti, Sandholz, Hagenlocher, Rizzi, Frey, & Garschagen, 2019; Chew & Jhari, 2014; Kuo, Chen, Tseng, Ju, & Huang, 2008; Lepp & Gibson, 2003; Okumus & Karamustafa, 2005; Wang, 2009; Wolff & Larsen, 2014) and attribute more importance to the safety aspects and the rapidity of reaching a certain destination. This behaviour has a direct consequence for the tourism sector and the actors involved: to stimulate people to travel, more attention should be paid to safety and rapidity.

5. CONCLUSIONS, IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH

This paper explored the relationship between mood and the choice of long-distance travel for the younger generations. In addition, the study proposed and tested the moderating role of COVID-19 and its relevance for the relationship between mood and travel, using a quantile regression analysis with group effects.

To the authors' best knowledge, this is the first study to investigate the relationship between mood and travel via air transport in longer distance destinations choices (defined as outside Europe for Italians), considering the significance attributed to travel and the influence that an external event/shock, such as COVID-19, may have on GenZ and Millennials' choices.

The authors applied a combined qualitative/quantitative approach (a mixed-methods sequential exploratory design). Based on the analysis of the data gathered from an online survey, with 1,111 valid responses from university students (GenZ and Millennials), this paper sheds some light on the positive and significant relationship between mood and the number of trips made outside Europe, and highlights the positive moderating effect of the travel experience and the negative moderating effect of COVID-19 in the relationship between mood and air travel.

In line with previous literature (e.g. Aliperti, Sandholz, Hagenlocher, Rizzi, Frey, & Garschagen, 2019; Chew & Jhari, 2014; Kuo, Chen, Tseng, Ju, & Huang, 2008), the results obtained through the quantile regression with group effects show that the mood for travelling differs among the respondents according to their attitude towards COVID-19, conditioning the way of travelling of young people. Perceptions of COVID-19 have an impact on travel's choices (Zheng, Luo & Ritchie, 2021); while some may feel very comfortable and safe during longer distance travel and flights, others are more anxious. However, younger peoples' mood also depends on the number of longer trips they make outside Europe and their experience in travelling. It has clearly emerged that although the younger generations consider travel and acquisition of experiences as essential (Whitmore, 2019), they generally travel in Europe and only few of them engage in longer distance travel outside Europe.

Based on their risk perception and consequent behaviour, we tested the reaction of younger people to COVID-19. In the literature, past studies have investigated how external events/shocks like terrorist attacks and/or political and economic instability may affect the tourism industry and how these events are perceived as risky by tourists in certain countries and can influence the choice of destination. In line previous studies, we confirmed that COVID-19 has a significant effect on the relationship

between mood and travel, mostly among those who are afraid of COVID-19. The consequence is that tourism must consider the different emotions and reactions to external events/shocks to engage people in travelling. When a negative feeling overwhelms people after a negative external event/shock (such as COVID-19) then a lower propensity to travel should be expected.

Having the above in mind, the contribution of this paper is manifold. First, we extend the literature in the field of tourism, considering a new multidisciplinary line of research on COVID-19 related matters. Second, we contribute to the literature by investigating the behaviour of people in tourism, offering new insights into the younger generations and their relationship with travel and flights that has been an under-investigated topic. Third, we answer the call for research on people's tourism behaviour in the pandemic era (Li, Nguyen & Coca-Stefaniak, 2020), giving evidence of the actual influence of COVID-19 on the younger generations by applying an advanced econometric technique, i.e., quantile regression with group effects, recently proposed by Davino & Vistocco (2018).

The results of our research should be seen considering the following limitations, which open up future research opportunities. In particular, this research considers just one geographical area. Although this area (i.e., Turin in Italy) was one of the first and most badly hit by COVID-19, attention must be paid to the generalisability of the findings in different contexts. An additional limitation is that we considered as longer distance travel, trips made outside Europe without a clear indication of hours of flights. This is because people taking part in the focus group regard as clearer the distinction between travel outside and inside Europe instead of the number of hours per flight from a cognitive distance perspective (Papatheodorou, 2021).

Future research can extend the questionnaire to different geographical contexts and different cultures. Since an experience with similar events can influence the perception of risk (Sharifpour, Walters, & Ritchie, 2014), analysing a geographical area that previously suffered a similar event can open up new considerations. Another aspect is that we gathered information from university students, whose perspective can be different from younger generations with a different background, i.e. people that started to work after high school. Therefore, a suggestion for future research would be to consider not younger generations but those who feel young at heart in general irrespective of their age. In addition, a future study can take into consideration the influence of the government initiatives, i.e., restriction due to COVID-19, on the travelling choices made by people and consider temporal complexity and evolutionary behavioural patterns, i.e., how people gradually get accustomed to COVID-19 as this eventually progresses to become endemic.

Moreover, one aspect that is relevant both from a theoretical and an empirical perspective (as emerged during the focus group analysis) is the economic and financial consequences for the industry and its actors. Although some financial aspects have been considered, there is a need for deeper analysis of the consequences linked to COVID-19. Specifically, it may be interesting to investigate the main economic-financial instruments used to support companies in the sector, at both the public and the private level (for example, strengthening digital invoice financing platforms through investment by a public entity as an investor in the securities issued by the assignee of the credit; payment of public administration's trade payables through the activation of partnerships with FinTech platforms).

Finally, all the questions associated with mood in relation to flying, the relevance of travel and feelings about COVID-19 were examined from the perspective of individual perception; thus, this study does not address more extensive viewpoints such as the possible role of the media in younger generations' travel decisions or their role in influencing both the mood and the willingness to travel in the post-pandemic era. Further studies can focus on this dimension especially from a social media perspective.

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APPENDIX

Gender:

- Man
- Woman

Age: (number)

Education:

- Bachelor's degree
- Master's degree
- Other/ please state (e.g. Ph.D. candidate, executive MBA)

Income:

- 0 – 15,000€
- 15,001 – 28,000€
- 28,001 – 55,000€
- 55,001 – 75,000€
- 75,000€

Budget for travel

- <500
- 501–1,000
- 1,001–1,500
- 1,501–2,000
- >2,001

Air ticket/Budget

- <10%
- 11-20%
- 21-30%
- 31-40%
- 41-50%
- >51%

Modes of transport

- Airplane
- Car
- Coach
- Train
- Cruise ship
- Motorcycle

How many times have you been to a continent outside Europe in your life (longer travel)?

- Never
- once
- 2-3 times
- 4-5 times
- > 5 times

How important is travel for you (significance of travel)?

(1= very low importance; 5= very high importance)

For shorter travel (inside Europe) which is your favourite means of transport?

- Airplane
- Car
- Train
- Coach

- Cruise ship

Evaluate the following elements based on how much they weigh on the choices of TRAVELING FAR BY PLANE (OUTSIDE EUROPE) [hours spent onboard]:
(1= very negative; 5= very positive)

Evaluate the following elements based on how much they weigh on the choices of TRAVELING FAR BY PLANE (OUTSIDE EUROPE) [cost of air fares]:
(1= very negative; 5= very positive)

When you take a LONGER TRIP BY PLANE (OUTSIDE EUROPE) how do you evaluate the following feeling* to describe your state of mind

* [Tranquility] / [Safety] / [Relaxation] / [Sense of Rapidity] / [Comfort] / [Convenience] / [Entertainment] / [Anxiety]:
(1= I don't feel at all this way; 5= I feel a lot this way)

During the period we are living in – i.e., COVID-19 – had you planned trips that have already been cancelled?

- Yes
- No

Are you afraid of COVID-19?

- Yes
- No