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How Covid-19 influenced peoples' intention to travel abroad

Rafael Capitão Marques

Dissertation presented as partial requirement for obtaining the Master Degree Program in Statistics and Information Management

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HOW COVID-19 INFLUENCED PEOPLES' INTENTION TO TRAVEL ABROAD

By

Rafael Capitão Marques

Dissertation presented as partial requirement for obtaining the Master's degree in Statistics and Information Management, with a specialization in Information Analysis and Management.

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STATEMENT OF INTEGRITY

I hereby declare having conducted this academic work with integrity. I confirm that I have not used plagiarism or any form of undue use of information or falsification of results along the process leading to its elaboration. I further declare that I have fully acknowledge the Rules of Conduct and Code of Honor from the NOVA Information Management School.

Lisbon, 23rd of November, 2022

ABSTRACT

Tourism is one of the most important sectors in the economy of many countries around the world and Portugal is not an exception. However, in 2020 and 2021, due to the Covid-19 pandemic, this sector was drastically affected, as result of the huge decrease in peoples' mobility and the restrictions applied to reduce the spread of the virus. This scenario influenced the way we think and the way we make decisions, especially when it concerns to travel. The goal of this study is, using structural equation modeling (PLS-SEM), evaluate a model based on the theory of planned behavior to understand how the situation mentioned above affected travel planning and tourists' intention to travel abroad, if the importance of some of the factors who influence travel intention was affected when compared to the pre-pandemic period. Based on a sample of 200 responses, safety perception to travel abroad is influenced by the fear of being infected while the person is traveling, by the trust on local authorities and by consumer generated content. Intention to travel abroad is influenced by prices and attitude, which is also influenced by the safety perception. Safety perception also moderates the relationship between perceived behavioral control and distance with travel intention.

KEYWORDS

Travel intention; Theory of planned behavior; Post pandemic behavior; Covid-19; Safety perception

Sustainable Development Goals (SGD):

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LIST OF ABBREVIATIONS AND ACRONYMS

WHO	World Health Organization
UNWTO	(United Nations) World Tourism Organization
TPA	Theory of Planned Behavior
PBC	Perceived Behavioral Control
CGC	Consumer Generated Content
eWOM	Electronic Word of Mouth

1. INTRODUCTION

Tourism sector is, probably, starting the recovery from the worst crisis that has ever happened in this sector (European Parliament, 2021). On March 11,2020 when the World Health Organization characterized Covid-19 as a pandemic (WHO, 2020), the preventive measures applied by every country were a clear sign that tourism was going to be brutally affected and, most critical, no one was able to predict when this scenario was going to end and, even in that case, under what conditions it was going to happen. At this moment, we can start to measure and analyze some of the impacts caused by Covid-19. Apart from the 6.5 million deaths worldwide, including over 25 thousand in Portugal (WHO, 2022), tourism suffer significant losses. According to (United Nations) World Tourism Organization, the losses were estimated in 1 trillion euros, just in 2020, and over 100 million jobs were at risk. Another consequence was the huge reduction of the air traffic as result of a 74% reduction of international tourists' arrivals worldwide (UNWTO, 2021). To minimize this consequence, many countries around the world were forced to financially support the airlines, including Portugal (European Commission, 2021). However, even knowing that these consequences generated a significant impact, it is already possible to identify some positive signals of recovery (Eurostat, 2022). Given the importance of the tourism industry in the economy of many countries, including Portugal, where, in 2019, tourism sector was responsible for 51,2% of exports of services and 19.5% of total exports, and tourism revenues corresponding to 8.5% of the Portuguese GDP (Bank of Portugal, 2022), it is important to study and understand how tourists will react to this experience and, in which way, it may have affected peoples' intention to travel abroad.

Although there is a significant number of works that study the impact of each factor, individually, in travel intention, only a few studies combine some of them in a single model. Moreover, after the impact suffered by the tourism sector, previously mentioned, restrictions on peoples' mobility and a public health crisis, the scenario has changed. Therefore, this study intends to fill two main gaps in the literature. First, understand how Covid-19 pandemic affected peoples' intention to travel abroad and the influence of each factor. Second, explores how safety perception was affected by the new factors (travel restrictions, data provided by local authorities and the fear of being infected in a foreign country) introduced as result of the pandemic and how it moderates the relationships between the influencing factors and intention to travel abroad.

Thus, this work presents two contributions. Firstly, it studies the effects of the factors that influence peoples' intention to travel abroad, after a pandemic. Secondly, the results identified some factors that influence the perception of safety and, through the evaluation of the moderation effects, it was possible to analyze how safety influences other factors. According to these results, both local authorities and companies that provide all kind of services to tourists, such as restaurants and accommodation providers, can extract some information from the results and took some measures accordingly.

This study is structured as follows. The next section contains the literature review, where a theoretical background regarding the travel decision determinants and post pandemic expected behavior is provided. Section 3 presents the research model and the hypotheses to be tested. Section 4 explains the methodology used and how data was obtained. It also characterizes the sample obtained. In Section 5, the technique used to run the model is explained, the results of the research model are presented and the hypotheses are evaluated according to the results. Section 6 discusses the results

and identifies some theoretical and practical implications, but also some limitations of this study. Finally, in Section 7 a conclusion is provided.

2. LITERATURE REVIEW

Most of the studies (Lyons et al., 2009; Nicolau & Más, 2006; Villacé-Molinero et al., 2021) that analyze the factors that influence travel intention and/or destination choice of those travels, they do it individually, meaning that each study is focused on a specific factor and the importance of that factor in the decision process. This study pretends to evaluate how some of these factors, combined with the ones introduced by the pandemic, were affected by the Covid-19 pandemic.

2.1. TRAVEL DECISION DETERMINANTS

The distance between the origin country and the destination country, combined with price, are two relevant factors in the travel decision process. According to L.Nicolau et al., (2006), we realize that the influence of these factors depends on the type of travel that the individuals desire. When the goal of the travel is to enjoy a better weather or to visit family and friends, the influence of distance in the process of choosing the destination is lower. Besides, the intention and interest to meet and contact with new cultures also results in a lower influence of both price and distance, in the process of selecting the destination (LaMondia et al., 2010). In addition, theory of distance decay states that the number of tourists that a destination receives from a specific origin has a negative correlation with the distance between the destination and the origin area of the tourist (Xue & Zhang, 2020).

Safety is, eventually, one of the most affected factors by the pandemic. According to Villacé-Molinero et al., (2021), this perception was affected by the Covid-19 crisis and, in a pandemic scenario, the decision to whether travel or not is influenced by the level of confidence in the local authorities regarding safety conditions. Besides, according to the same study, past travel experience is not related with the decision to maintain or cancel trips planned during Covid-19. However, it is interesting to mention that a few studies, all prior to 2020, concluded that tourists were more concerned with possible crimes and accidents, where they were possible victims, than with infectious diseases (Larsen et al., 2009). Finally, this same article indicates that worrying and risk identification tends to be higher and more present in the moment that a person is considering destinations for a future travel than the worrying and risk identification assumed by tourists that are actually traveling. Recurring to the theory of planned behavior, Quintal et al., (2010) concluded that safety perception influences attitudes towards visiting foreign countries.

2.2. POST PANDEMIC EXPECTED BEHAVIOR

Park et al., (2021), evaluated how this public health crisis influenced tourists' preference for crowed or non-crowded places as it is a common situation to visit very crowed places during holidays. Two distinct scenarios were identified: the ones that are very aware and concerned with Covid-19 consequences tend to avoid places where it is more likely to happen an agglomeration of people, however, on the other side, the ones who feel the need to visit unique and specific places tend to disregard the fact that eventually they will have to share places with a lot of different persons. As identified by Nicolau & Más (2006), when a person has specific reasons to travel to a specific destination, factors that could be seen as disadvantages or would reduce the probability of choosing that destination tend to be ignored or disregarded.

The perception that people create regarding how other places have dealt and are dealing with the pandemic will also have an impact when deciding whether to visit or not that same destination. Using the theory of planned behavior (TPB), Li et al. (2021) identified some post pandemic expected behaviors, such as, shorter holiday periods, that will only happen a few months after the pandemic situation is under control.

Similar do the previous article, Miao et al. (2021), using the theory of terror management, also identified tourists' expected behaviors, either in the near future, but also in the more distant future. Three different scenarios are expected in the near future, some people will make their decisions based on past experience, meaning they continue to visit the same destinations they were used to visit, however, avoiding certain activities. On the other side, there will be persons that will make their destination choices based on emotions, disregarding the risk associated with these same choices. In a less extreme scenario, it is created a profile with tourists that remain their intention to travel, although, because they are aware of the risk associated with such activities, they will take some precautions. To conclude, a behavior that has already been proved when the initial results of the vaccination's efficiency were published, is the great desire to recover and make up for all the time and experiences cancelled as a result of preventive measures applied due to the pandemic. This desire can be sufficient to ignore the perceived risk associated to the virus and, as consequence, they will travel again. In a more distant scenario, also according to the World Tourism Organization, domestic tourism is expected to play a key role in the sector's recovery, reducing the relevance of international tourism, and the demand for options during the off season may increase, in order to avoid congested areas (UNWTO, 2020).

The most important output from this section is the shared opinion that tourists' behavior is going to change, it may be difficult to predict specific behaviors, but it seems clear that changes are going to happen, which means it is important to study how it will affect travel intention.

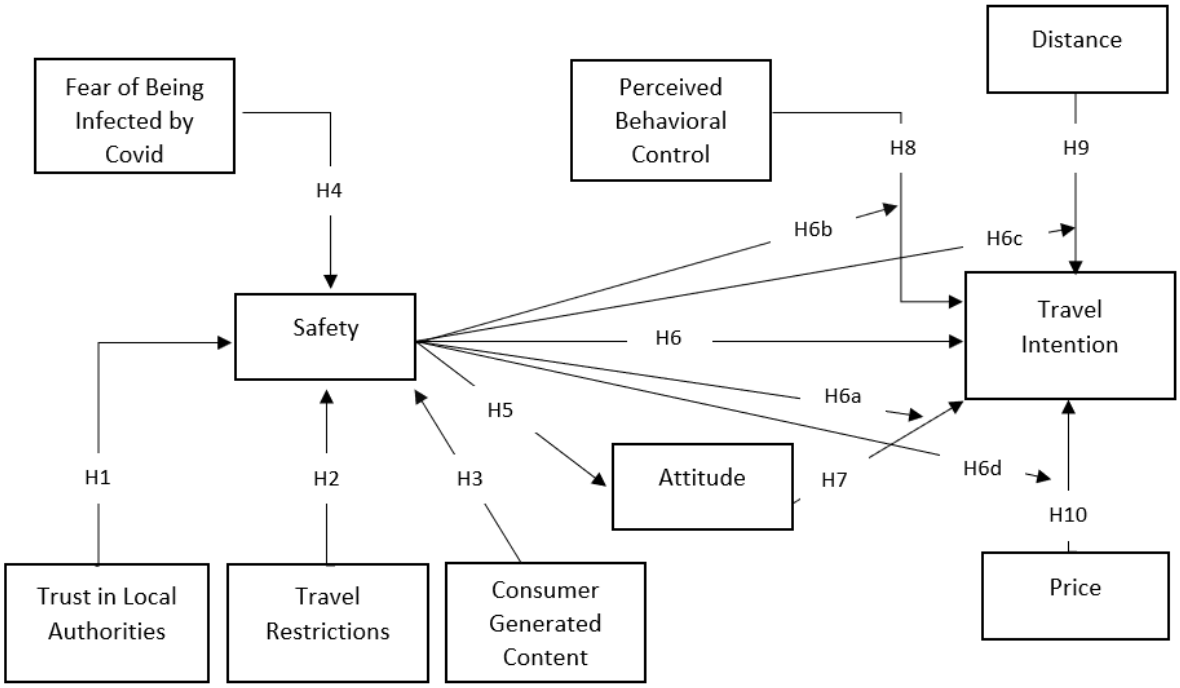
2.3. CONSUMER GENERATED CONTENT (CGC)

Consumer generated content in the context of traveling is all the information generated by shared opinions, reviews and past experiences from previous users on specific attractions, accommodation, restaurants or services provided in a destination (Filieri et al., 2015). Websites that gather this information, such as TripAdvisor, are likely to become the primary online source of travel information and their relevance is highlighted through studies proving that a large proportion of travelers use this information for travel planning (Xiang & Gretzel, 2010). Filieri et al., (2015) mentioned previous studies that have provided evidence that CGC influence hotel rooms sales and travelers' purchase intentions about which destination to travel to, which is a normal consequence as people equally respect CGC and officially provided information. Given the importance of electronic word of mouth (eWOM) and how easy it is to post positive or negative opinions about past experiences, marketers should also be aware and develop online campaigns to compete with CGC (Xiang & Gretzel, 2010). For this reason and the proven influence, it is relevant to add the impact of CGC on travel intention.

3. RESEARCH MODEL

The proposed model integrates constructs from the theory of planned behavior combined with constructs emerged from the literature to explain travel intention. Although this theory and the additional constructs have already been used in models to study tourism related subjects, this study pretends to evaluate if the pandemic had some impact on the influence of each factor because, after a pandemic crisis, their influence may have changed.

Theory of planned behavior (Ajzen, 1991) has been widely used in different tourism studies (Li et al., 2021; Amaro & Duarte, 2015; Lam & Hsu, 2006) and has proved his efficiency to explain travel intention. For that reason, perceived behavioral control and Attitude were added to the model. Other constructs were added to analyze their association with the TPA's constructs, as their influence in such factors has been proved but not in a pandemic scenario, and also their direct association with travel intention. Figure 1 presents the research model.



Note: Age and Gender were used as control variables

Figure 1 - Research Model

Following, the hypotheses of the research model are presented.

The importance of local authorities has never been as significant as it is nowadays. Local authorities have the power to apply measures to control the pandemic, which can influence tourists' plans, and are also responsible to share all the data related to the Covid-19 situation, number of infections and deaths. According to Shin et al., (2022), the likelihood of visiting a place is positively associated with the level of trust on the authorities of that specific place. They also mentioned the paradox of trust, as a higher level of trust in authorities also results in a lower perception of risks associated with Covid-19, then increasing the perception of safety. Thus, it is expected that trust in local authorities will have a positive effect on safety perception:

H1: Trust in local authorities positively influences safety perception.

The pandemic introduced a new condition to the travel planning process: travel restrictions. Shin et al., (2022), concluded that individuals who trust and agree with the measures applied to mitigate the spread of the virus are less likely to travel, especially when it comes to non-essential activities. As such, if someone agrees with the measures it might be because they do not consider that travel is safe and that is the reason why the restrictions are needed. Therefore, travel restrictions are expected to negatively influence safety perception:

H2: Travel restrictions negatively influence safety perception.

eWOM has been argued as a contribution to develop reputation and trust and can also be seen as a key factor to reduce risk perception and uncertainty, thus, increasing safety perception (Sparks & Browning, 2011). As CGC is useful for travelers decide which options are the most suitable for their demands at the destination (Ayeh et al., 2013), it is possible to argue that CGC influences the trust level on the different options provided at the destination, according to the previous users' reviews. Although there is a tendency for negative reviews generate a stronger impact than positive reviews, it is expected that CGC positively influences safety perception:

H3: CGC positively influences safety perception.

According to Zheng et al.,(2021), peoples' pandemic travel fear mainly emerges from perceived severity and possibility of being infected by Covid-19. Moreover, other consequence of testing positive to Covid-19 in a foreign country is the obligation to stay confined in that country, which generates multiple expenses, mainly if health care is needed, and some tourist may not be prepared to deal with such an unexpected event. Thus, it is expected that fear of being infected by Covid in a foreign country negatively influences safety perception:

H4: Fear of being infected by Covid when traveling negatively influences safety perception.

In different subjects, trust has been identified as a favorable influence to consumer attitude and intention to engage (Alsajjan & Dennis, 2010; Amaro & Duarte, 2015). The perception of safety in online travel products will generate a better attitude towards them and will also increase the likelihood to repurchase (Agag & El-Masry, 2016). Consumers' intentions are determined by different factors and one of the most important is trust (Sparks & Browning, 2011). Therefore, it is expected that safety perception has the potential to influence both attitude towards travel intention and travel intention itself:

H5: Safety perception positively influences attitude towards travel intention.

H6: Safety perception positively influences travel intention.

Safety perception was influenced by the pandemic and each person had a different experience through this crisis (Schmiedeberg & Thönnissen, 2021). According to Zheng et al., (2021a), peoples' travel fear is not positively influenced by their location´s pandemic severity, however, people who perceived a higher risk during the pandemic will wait for a longer period to travel again than the ones who perceive a smaller risk, after the removal of travel restrictions. It was also concluded that, after the outbreak, people will prefer independent short-distance travel. For these reasons, safety perception can be

expected to influence the importance of other factors on travel intention, given that people would be willing to change their decisions or behavior to ensure a safer travel. Therefore, apart from the direct effect on attitude and travel intention, safety perception will also be tested as a moderator:

H6a: Safety perception moderates the relationship between attitude towards travel intention and travel intention.

H6b: Safety perception moderates the relationship between the PBC construct and travel intention.

H6c: Safety perception moderates the relationship between the distance construct and travel intention.

H6d: Safety perception moderates the relationship between the price construct and travel intention.

Attitude includes the behavioral beliefs and the assessment of their consequences (Ajzen, 1991). Amaro & Duarte, (2015) mentioned several studies with evidence that attitudes towards online shopping is the most influence determinant and positively influences to purchase travel online. Intention to book a hotel online is also very affected by attitude (Agag & El-Masry, 2016). These studies verify the relevance of attitude in intentions related to travel and, for that reason, it is expected that travel intention will not be an exception and will be positively influenced by attitude:

H7: Attitude towards travel intention positively influences travel intention.

Following Ajzen, (2002), a high degree of perceived behavioral control (PBC) exists when a person believes that has all the resources to perform a behavior and that can overcome any obstacle that may emerge. Previously, Ajzen, (1991) also defined perceived behavioral control as the perceived ease or difficulty of performing the behavior. In the context of tourism, Amaro & Duarte, (2015) concluded that PBC positively influences intentions to purchase travel online. Therefore, it is expected that a person who has all the conditions and all the necessary resources to travel will have a higher travel intention:

H8: Perceived behavioral control positively influences travel intention.

According to Kah et al., (2016), travel distance and other spatial barriers negatively influence peoples' intention to participate in leisure activities. However, as mentioned in the section 2.1, distance can be a less relevant concern according to the type of travel that tourists pretend to do and the reasons why they will travel. Remembering that some tourists were forced to flight home at the beginning of the pandemic, travel to distant places may not be the most desired option at this moment. Thus, it is expected that distance has a negative impact on travel intention:

H9: Distance negatively influences travel intention.

The "low-cost" concept is frequently used in the tourism industry and it can be applied in the different sectors, such as airlines, accommodation, rent-a-car, etc. Juan L.Nicolau, (2006) concluded that price is a constraint on the choice of destinations. Nevertheless, price's impact can have a reduced impact according to the reasons behind tourists' travel intention. For these reasons and the different possibilities "low-cost" services provide, price is expected to have a positive effect on travel intention as each person can find an option, according to their possibilities:

H10: Price positively influences travel intention.

4. RESEARCH METHODOLOGY

4.1. MEASUREMENT

To gather the information to evaluate the hypotheses, an online questionnaire was created. According to the literature review, different variables and their respective items were included in the survey. Table 1 resumes all items considered in the survey and their associated construct and sources.

Table 1 - Measurements Items

Construct	Items	Source
Trust in Local Authorities	TLA1 – I trust in the data provided by local authorities of the places I intend to visit. TLA2 – Data provided by local authorities is useful for travel planning. TLA3 – I follow the communication provided by local authorities from the places I intend to visit.	(Shin et al., 2022)
Travel Restrictions	TR1 – I agree with the travel restrictions applied due to Covid-19. TR2 – I understand the need to apply travel restrictions to control Covid-19 pandemic. TR3 – I respect the travel restrictions applied due to Covid-19.	(Shin et al., 2022)
Consumer Generated Content	CGC1 – CGC makes my travel planning easier. CGC2 – CGC is useful for travel planning. CGC3 – CGC is reliable.	(Ayeh et al., 2013)
Fear of Being Infected by Covid-19	FBI1 – I am afraid of being infected in a foreign country. FBI2 – I perceive more risks if I am infected in a foreign country than in my origin country. FBI3 – I am aware of the consequences of being infected in a foreign country. FBI4 – Covid-19 is a health threat to tourists.	(Zheng et al., 2021)
Safety	S1 – I believe that travel abroad is safe. S2 – I only travel to safe destinations. S3 – I do not perceive risks when I am traveling abroad. S4 – There is not much uncertainty associated with traveling abroad.	(Ayeh et al., 2013)
Attitude	Att1 – I am willing to travel abroad. Att2 – Travel abroad is a good idea. Att3 – Travel abroad is pleasant. Att4 – Travel abroad is exciting.	(Li et al., 2021);(Amaro & Duarte, 2015)
Perceived Behavioral Control	PBC1 – I have financial resources to travel abroad. PBC2 – I have the necessary resources to travel abroad. PBC3 – I have availability to travel abroad. PBC4 – I am confident that I can travel abroad.	(Amaro & Duarte, 2015)
Distance	D1 – The farther the destination is from my place of residence, the more I want to visit that place. D2 – The farther the destination is, the happier I feel when I think of visiting there. D3 – The farther the destination is, the more relaxed I feel when I think of visiting there. D4 – The farther the destination is, the more excited I am to think about visiting there.	(Cao et al., 2020)
Price	P1 – Travel abroad is reasonably priced. P2 – Travel abroad is a good value for the money. P3 – At the current price, travel abroad provides a good value.	(Venkatesh et al., 2012)
Travel Intention	TI1 – I intend to travel abroad in the future. TI2 – I will try to travel abroad in the future. TI3 – I expect to travel abroad in the future. TI4 – I plan to travel abroad often.	(Ajzen, 1991)

4.2. DATA

Data to perform the analysis was gathered through an online survey conducted to people residing in Portugal and it was applied the seven-point Likert scale. To reach a higher number of people, it was developed in Portuguese, and, for that reason, items were translated to Portuguese to be included in the survey. Data collection occurred from April to September 2022.

A sample of 200 respondents was collected. Considering "Age", the youngest respondent is 18 years old and the oldest is 66 years old. The average age of the respondents is 26.96 years. Regarding "Gender", 60% of the respondents are women and 40% are men. Almost 90% of the people in our sample visit other countries at least once a year and almost 60% traveled to a foreign country between March 2020 and February 2022. The common method bias was evaluated in two ways. First, using Harman's one-factor test (Kock et al., 2021) it was concluded that the first factor explains 33.5% of the variance, meaning that most of the variance is not explained by one individual factor. Second, using the marker variable test (Williams & McGonagle, 2016), the maximum shared variance with other variables has a value of 0.066 (6.6%), which is a reasonable value (Johnson et al., 2011). Therefore, no significant common method bias was identified.

5. DATA ANALYSIS

For the assessment of the research model, this work uses structural equation modeling (SEM) with the partial least squares (PLS) technique. Variance-based structural equation modeling (PLS-SEM) is primarily used to develop theories and test new models (Benitez et al., 2020). The measurement discussion states how the constructs are related to each other and allows the inclusion of more complex relationships, such as mediators and moderators. Then, a conceptual model is prepared to illustrate the hypothesized relationships. Finally, PLS SEM evaluates the relationships between the factors and the target variable (Hair et al., 2011). Having this in mind, this method was considered the best options to fulfill the goals of this project. The model was estimated using SmartPLS 4.0 (Ringle et al., 2015) and the results are analyzed in the next sections.

5.1. MEASUREMENT MODEL

To ensure the quality of our reflective measurement model it is necessary to verify the internal consistency, convergent reliability, and discriminatory validity for the reflective constructs. Regarding internal consistency, we can see on Table 2 that all constructs have a composite reliability value higher than 0.7, which ensures that all constructs are internally consistent (Nusair & Hua, 2010). Also in Table 2, the average variance extracted (AVE) values are all higher than 0.5, which proves that each construct explains most of the variance of its indicators (Hair et al., 2011), then convergent validity is demonstrated. To assess indicator reliability, it is necessary to analyze the loadings presented on Table 5 in Appendix A and, as we can see, all values are higher than 0.6, meaning that all values are acceptable and indicator reliability ensured.

Next step is to analyze the discriminant validity and there are three methods to do so. First criterion is evaluated through the loading values, that must be higher than the cross-loadings (Yoon et al., 2001), which happens in our work, as proven on Table 5 in Appendix A. Fornell-Larcker criterion is used to ensure that a construct shares more variance with its associated indicators than with other construct (Hair et al., 2022). Through the AVE values presented on Table 2, we can conclude that the criterion is supported. Finally, Heterotrait-Monotrait Ratio (HTMT) is the last criterion and, given that all values are lower than 0.9 (Table 3), this criterion is also supported. For these reasons, we can conclude that all constructs have discriminant validity.

Table 2 - Mean, Standard Deviation (SD), Composite Reliability (CR) and Fornell-Larcker Table

Constructs	Mean	SD	CR	TLA	TR	CGC	FBI	S	Att	PBC	D	P	TI
TLA	5.628	1.266	0.916	**0.900**									
TR	5.603	1.455	0.964	0.467	**0.885**								
CGC	5.407	1.297	0.934	0.545	0.440	**0.908**							
FBI	3.908	1.860	0.834	0.047	0.272	-0.032	**0.792**						
S	4.715	1.797	0.789	0.469	0.347	0.508	-0.233	**0.813**					
Att	6.263	1.055	0.950	0.416	0.230	0.516	-0.194	0.563	**0.909**				
PBC	5.179	1.533	0.867	0.310	0.181	0.370	-0.084	0.432	0.520	**0.862**			
D	3.629	1.749	0.937	0.144	-0.085	0.095	-0.152	0.247	0.236	0.212	**0.888**		
P	5.293	1.523	0.920	0.342	0.110	0.436	-0.282	0.388	0.687	0.520	0.339	**0.829**	
TI	6.201	1.269	0.928	0.304	0.228	0.454	-0.179	0.417	0.783	0.434	-0.085	0.686	**0.932**

Note: Values in bold are the AVE square root. Trust in Local Authorities (TLA); Travel Restrictions (TR); Consumer Generated Content (CGC); Fear of Being Infected (FBI); Safety (S); Attitude (Att); Perceived Behavioral Control (PBC); Distance (D);Price (P); Travel Intention (TI)

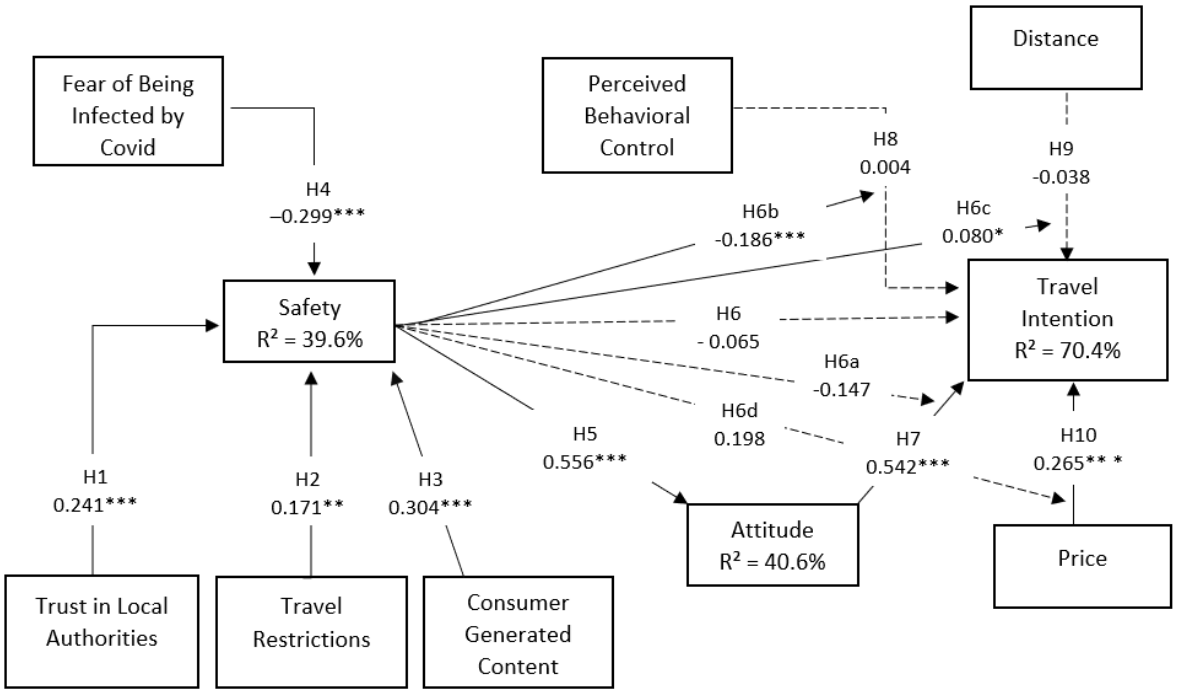
Table 3 -Heterotrait-Monotrait Ration (HTMT)

Constructs	TLA	TR	CGC	FBI	S	Att	PBC	D	P	TI
TLA										
TR	0.535									
CGC	0.607	0.485								
FBI	0.098	0.392	0.082							
S	0.572	0.435	0.635	0.327						
Att	0.455	0.250	0.557	0.239	0.641					
PBC	0.357	0.215	0.426	0.115	0.595	0.572				
D	0.138	0.111	0.095	0.228	0.381	0.221	0.225			
P	0.410	0.124	0.514	0.367	0.522	0.763	0.622	0.355		
TI	0.333	0.255	0.487	0.225	0.457	0.832	0.473	0.205	0.747	

Note: Trust in Local Authorities (TLA); Travel Restrictions (TR); Consumer Generated Content (CGC); Fear of Being Infected (FBI); Safety (S); Attitude (Att); Perceived Behavioral Control (PBC); Distance (D); Price (P); Travel Intention (TI)

5.2. STRUCTURAL MODEL

Before interpreting any result from the structural model, it is necessary to be sure that the model does not have any collinearity issue. To do so, variance inflation factor (VIF) values should be lower than 5 (Hair et al., 2022), which is the case in this work. To assess the significance of path coefficients it was used a Bootstrapping procedure with 5000 samples. The structural model is presented in Figure 2.



Note: ***p<0.01; **p<0.05; *p<0.10

Figure 2 - Structural Model for Travel Intention

The tested model explains 39.6% of the variation on safety perception while traveling abroad. The hypotheses of trust in local authorities (β=0.241, $p < 0.01$), travel restrictions (β=0.171, $p < 0.05$), CGC (β=0.304, $p < 0.01$) and fear of being infected by covid (β=-0.299, $p < 0.01$) are all statistically significant. Thus, we can conclude that hypotheses H1, H3 and H4 are supported, but H2 is not.

Regarding attitude, the model explains 40.6% of the variance. The hypothesis of safety (β=0.556, $p < 0.01$) is statistically significant, which confirms the hypothesis H5.

Finally, the model explains 70.4% of the variation on intention to travel abroad. The hypotheses of attitude (β=-0.542, $p < 0.01$) and price (β=0.265, $p < 0.01$) are statistically significant, but the ones from safety (β=-0.065, $p > 0.10$), perceived behavior control (β=0.004, $p > 0.10$) and distance constructs (β=-0.038, $p > 0.10$) are not. As such, hypotheses H7 and H10 are supported, but hypotheses H6, H8 and H9 are not supported. The moderating effect of safety perception in attitude (β=-0.147, $p > 0.10$) and in price (β=0.198, $p > 0.10$) is not statistically significant and, therefore, H6a and H6d are not supported. On the opposite side, for the PBC (β=-0.186, $p < 0.01$) and distance (β=0.080, $p < 0.10$) constructs, the moderating effect is statistically significant. Thus, H6b and H6c are supported. According to these results, it is concluded that safety perception, apart from the influence on Attitude towards travel intention, it also moderates the relationships between PBC and travel intention and between distance and travel intention.

Both control variables are not statistically significant. Thus, neither gender nor age have an impact on intention to travel abroad.

In summary, we can conclude that 8 out of the 14 hypotheses in our research model are supported.

6. DISCUSSION

There are some insights that we can extract from the results in the previous section. As we can observe in Table 4, out of the 9 hypotheses statistically significant, only one was not supported due to a difference in the signal of the expected influence. Overall, this model explains 39.6% of the variation on safety perception towards intention to travel abroad, 40.6% of the variation on attitude towards intention to travel abroad and, most importantly, 70.4% of the variation on intention to travel abroad (Hair et al., 2011).

As mentioned before, one hypothesis was not confirmed. Travel restrictions were expected to have a negative influence, but the results obtained confirm the opposite. As data were collected in a period where covid no longer was perceived as a major threat (Savadori & Lauriola, 2022), it is possible that travel restrictions were not as severe as in previous months (schengenvisa news, 2022) and, for that reason, restrictions enforced at the time may end up increasing tourists' perception of safety. As expected, perceiving a higher risk of being infected in a foreign country and identify covid as a threat are factors that negatively influence the perception of safety to travel abroad. On the opposite side, both CGC and trust on local authorities have a positive influence on safety perception, which can infer that data made available by these 2 sources are helpful and used to better prepare a travel to a foreign country. Perception of safety was also confirmed as a positive influence on attitude towards intention to travel abroad, however, it does not have any direct influence on intention to travel abroad. On the other hand, the total effect (i.e., the direct effect on travel intention plus the indirect effect through attitude) of perception of safety to explain intention to travel abroad is positive and statistically significant. Results also confirm that both attitude and price have positive effects on intention to travel abroad. This has also been proved in previous studies (Nicolau & Más, 2006; Shin et al., 2022) and cannot be seen as a surprise because if a person is willing and able to travel, finds all the necessary services at a reasonable price, given their own motivation to travel abroad, a positive influence in travel intention is an expected consequence. CGC, fear of being infected and trust on local authorities, via the mediating construct of safety perception, have an influence on intention to travel abroad. While fear of being infected affects negatively travel intention, which is the expected outcome given its negative influence on the perception of safety, both CGC and trust on local authorities have a positive influence on intention travel abroad. Finally, surprisingly, given the previous findings (Amaro & Duarte, 2015), neither perceived behavioral control or distance demonstrated any significant effect on intention to travel abroad.

Regarding the moderating effects, it is concluded that safety perception moderates the relationships between PBC and travel intention and between distance and travel intention. For the influence of PBC on travel intention, as we can see in Figure 3, it is concluded that when safety perception is higher, the perceived behavioral control has a lower influence on travel intention. However, when the perception of safety is lower, the importance of perceived behavioral control to explains travel intention increases. This outcome reveals that if a person feels safe about traveling to a foreign country, the need to have all conditions and means to travel abroad is reduced. For the relationship between distance and travel intention, as seen in Figure 4, it is possible to conclude that when a person has a high perception of safety, distance becomes less relevant, which reduces the negative impact of distance on intention to travel abroad. On the opposite side, if a person does not feel safe about traveling abroad, the negative influence of distance is reinforced and continues to be considered as a barrier to travel abroad. The

results of this work regarding the moderation effect of safety perception on the relationship between attitude and travel intention, and on the relationship between price and travel intention were considered non-significant. Therefore, the influence of both constructs is not differently affected by high or low perceptions of safety, however, as seen before, both variables have their own impact on travel intention, regardless of safety perception.

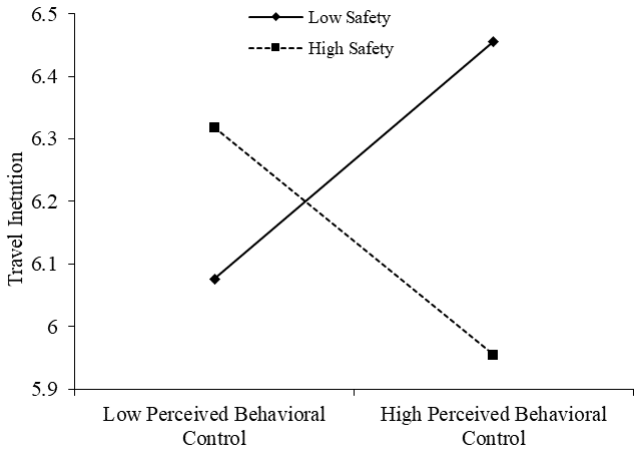


Figure 3 - Moderation effect of safety over perveived behavioral control to explain travel intention

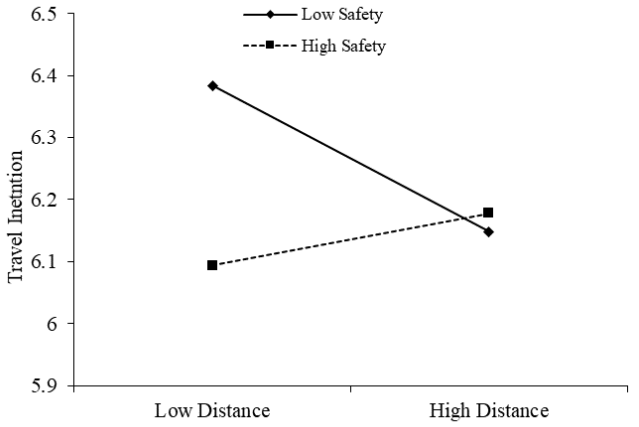


Figure 4 - Moderation effect of safety over distance to explain travel intention

One of the objectives of this work was to identify possible differences of behavior between the pre pandemic period and the actual period, where Covid is no longer perceived as a major threat. However, if we only consider statistically significant hypotheses, only H2 (the influence of travel restrictions in safety perception) had a different result from the one expected. As all hypotheses were created based on results from studies developed before the pandemic crisis and most of them were supported, it is possible to assume that, by the time the data was gathered, the influence of each factor on travel intention and safety perception was identical in both periods, before and after the Covid-19 pandemic. Table 4 summarizes the results of the hypotheses.

Table 4 - Hypotheses Conclusions

Hypotheses	Ind. Variable	Dep. Variable	Result	Conclusion
H1	Trust on Local Authorities	Safety	Positive and Stat. Significant	Supported
H2	Travel Restrictions	Safety	Positive and Stat. Significant	Not Supported
H3	CGC	Safety	Positive and Stat. Significant	Supported
H4	Fear Being Infected	Safety	Negative and Stat. Significant	Supported
H5	Safety	Attitude	Positive and Stat. Significant	Supported
H6	Safety	Travel Intention (TI)	Not Stat. Significant	Not Supported
H6a	Safety	Attitude -> TI	Not Stat. Significant	Not Supported
H6b	Safety	PBC -> TI	Negative and Stat. Significant	Supported
H6c	Safety	Distance -> TI	Positive and Stat. Significant	Supported
H6d	Safety	Price -> TI	Not Stat. Significant	Not Supported
H7	Attitude	Travel Intention	Positive and Stat. Significant	Supported
H8	PBC	Travel Intention	Not Stat. Significant	Not Supported
H9	Distance	Travel Intention	Not Stat. Significant	Not Supported
H10	Price	Travel Intention	Positive and Stat. Significant	Supported

6.1. PRACTICAL IMPLICATIONS

Although the pandemic situation is relatively under control worldwide, mainly due to the success of the vaccination plans (Holder, 2022), some constraints and measures are still being applied, especially in the tourism sector and it is now interesting to evaluate how these measures and the individual experience of each person affected his/her perception regarding traveling to a foreign country.

The role of local authorities was seen as relevant, which indicates that their information is useful and helps people feeling safer when considering travel abroad. As such, it is important that these entities continue to keep people informed, even if the interest for their data is decreasing. Although travel constraints are now less restrictive than in previous months, in some European countries they do not even exist anymore (Ledsom, 2022a), they were considered as an increment in peoples' perception of safety, which indicates that some measures, like wearing masks in public transports, were seen as needed or a reasonable precaution. Even though some rules are not being imposed anymore, keep them as recommendations may be a good decision. Consumer generated content continued to be a positive influence on safety perception and, as this factor was one of the most affected by covid, it is important for companies in the tourism sector to keep their reviews with positive opinions and ask their clients to provide feedback of their experiences, in order to turn potential customers into real customers. Knowing that safety perception has a positive influence on attitude and attitude has also a positive influence on travel intention, all parts of the tourism sector must understand the importance of proving to people that traveling continues to be a safe activity, either with marketing campaigns, in the case of countries really dependent on tourism, such as Portugal, or with hygiene certificates that were created during the worst periods of the pandemic and that can be issued to some activities related to tourism, such as restaurants, accommodation services or shared transportation services.

Price will always be a determinant factor to make choices between different destinations and choose what services to use while traveling. For this reason, if people consider the prices are fair for the return they are expecting, price will continue to positively influence travel intention. Price can also be related with CGC because usually it is one of the factors considered when writing reviews on a service and, therefore, as seen before, it is important to maintain positive reviews.

6.2. THEORETICAL IMPLICATIONS

This work presents the following theoretical implications. First, it developed a model that combines factors that, based on previous literature mentioned in section 2, influence the travel decision process with theories previously studied, but it also included factors introduced by the pandemic to study how travel intention was affected. Second, as Villacé-Molinero et al., (2021) highlighted, safety perception was affected by the covid-19 pandemic and this work used that factor as a moderator of the relationship between traditional factors and travel intention, which, to the best of our knowledge, has not yet been evaluated in other studies after the pandemic. Third, this study also evaluated the impact suffered by safety perception from new factors, such as travel restrictions and fear of being infected by covid, whose effect had not yet been fully analyzed. Finally, results indicate that trust on local authorities, travel restrictions, consumer generated content and fear of being infected are key factors to explain the perception of safety, while attitude towards travel abroad and price are key factors to explain travel intention. The results on the influence of each factor were, in almost all cases, in accordance with the previous studies, as shown in Table 4. Although safety perception does not have a direct impact on travel intention, it was concluded that safety moderates the relationship between perceived behavioral control and distance with travel intention.

6.3. LIMITATIONS AND FUTURE RESEARCH

The main limitation of this work is the volatility of the covid situation itself. Periods where the number of cases and deaths are lower, resulting in less restrictive measures, will reduce the impact of covid in each person's life and, therefore, people will perceive covid as a smaller threat to their lives. Obviously, the opposite would happen in periods where the pandemic situation was more dramatic. Therefore, the current pandemic situation influences the respondents' perceptions.

This study was only carried out in Portugal, a country where the vaccination plan was considered a huge success by the time people were answering to the survey (Sabina Castelfranco, 2021), which means that most of the people did not have any restriction to travel abroad (at the time, a vaccination certificate was the only requirement to travel abroad), which means the impact of travel restrictions was very small (Ledsom, 2022b). Thus, it would be interesting to develop the same work in countries with lower vaccination rates because their residents could be facing a different type of pandemic situation and the restrictions to travel abroad could also be more impactful.

The sample used to calculate the results has an average age of near 27 years old. While covid restrictions overall, not only the ones related to traveling, were being used to mitigate the spread of the virus, younger people were the ones who ignore them the most because they perceived less risks associated with covid. Develop a similar work with older respondents could produce different results.

7. CONCLUSION

Tourism sector was strongly affected by the covid-19 pandemic and it was expected that some behaviors from the tourists could also have been affected. As result, in the past months, researchers have been interested in study the consequences of the experiences lived in the last 2 years, with lockdowns and several restrictions to the normal life people were used to. This study is focused on international traveling. According to the results, a significant difference of behavior was not identified. From the new factors introduced by the pandemic, i.e., travel restrictions, data provided by local authorities and the fear of being infected in a foreign country, only travel restrictions did not have the expected influence on safety perception. Fear of being infected by covid in a foreign country, as expected, has a negative influence on safety perception, but the other two factors, to which we can add consumer generated content (CGC), they all have a positive influence on safety perception. Distance and perceived behavioral control (PBC) were not considered as significant factors to influence intention to travel abroad, however, both attitude, which is positively influenced by the perception of safety, and price have a positive influence on travel intention, as it was expected. This model explains 70.4% of the intention to travel abroad. The moderation effect of safety perception between the influencing factors and intention to travel abroad was also identified in two factors, distance and perceived behavioral control. Regarding distance, it reduces the negative influence of distance in travel intention. In the case of PBC, it reduces the positive it´s positive influence on travel intention. Therefore, from the 14 hypotheses in our research model, 8 hypotheses were supported. From these results, all the entities associated to the tourism sector are able to extract some information that can be materialized in measures to provide a better service and better conditions to future tourists.

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APPENDIX A – MEASUREMENT MODEL

Table 5 - Loadings and Cross Loadings

Construct	Item	TLA	TR	CGC	FBI	S	Att	PBC	D	P	TI
Trust in Local Authorities (TLA)	TLA1	**0.918**	0.378	0.520	0.023	0.472	0.396	0.312	0.142	0.364	0.242
	TLA2	**0.888**	0.388	0.459	0.120	0.382	0.342	0.278	0.158	0.283	0.241
	TLA3	**0.896**	0.502	0.486	-0.010	0.404	0.381	0.243	0.090	0.268	0.343
Travel Restrictions (TR)	TR1	0.408	**0.895**	0.323	0.318	0.260	0.107	0.133	-0.078	0.016	0.110
	TR2	0.412	**0.912**	0.391	0.263	0.298	0.249	0.163	-0.018	0.114	0.257
	TR3	0.415	**0.847**	0.435	0.161	0.348	0.236	0.177	-0.122	0.142	0.221
Consumer Generated Content (CGC)	CGC1	0.547	0.421	**0.947**	-0.024	0.472	0.498	0.319	0.070	0.416	0.449
	CGC2	0.509	0.464	**0.943**	-0.029	0.515	0.526	0.340	0.107	0.430	0.456
	CGC3	0.420	0.296	**0.830**	-0.037	0.384	0.364	0.357	0.079	0.335	0.318
Fear of Being Infected by Covid (FBI)	FBI1	0.064	0.242	0.004	**0.845**	-0.204	-0.133	-0.089	-0.166	-0.191	-0.088
	FBI2	-0.026	0.075	-0.109	**0.714**	-0.152	-0.124	-0.057	0.074	-0.180	-0.155
	FBI4	0.058	0.301	0.009	**0.810**	-0.193	-0.201	-0.052	-0.226	-0.296	-0.191
Safety (S)	S1	0.486	0.353	0.515	-0.242	**0.963**	0.604	0.411	0.190	0.395	0.457
	S4	0.197	0.164	0.244	-0.098	**0.628**	0.174	0.286	0.293	0.182	0.104
Attitude (Att)	Att1	0.444	0.230	0.516	-0.159	0.534	**0.917**	0.524	0.264	0.659	0.722
	Att2	0.386	0.133	0.482	-0.260	0.542	**0.934**	0.456	0.275	0.680	0.705
	Att3	0.317	0.230	0.400	-0.161	0.472	**0.862**	0.442	0.140	0.515	0.630
	Att4	0.359	0.249	0.470	-0.123	0.495	**0.920**	0.468	0.170	0.632	0.782
Perceived Behavioral Control (PBC)	PBC1	0.257	0.134	0.339	-0.056	0.357	0.467	**0.929**	0.204	0.513	0.382
	PBC2	0.242	0.121	0.332	-0.137	0.403	0.512	**0.930**	0.217	0.518	0.425
	PBC3	0.313	0.272	0.350	-0.038	0.383	0.355	**0.723**	0.189	0.364	0.305
	PBC4	0.275	0.127	0.265	-0.046	0.352	0.444	**0.850**	0.122	0.382	0.373
Distance (D)	D1	0.174	-0.053	0.081	-0.122	0.255	0.254	0.239	**0.910**	0.315	0.212
	D2	0.122	-0.078	0.088	-0.124	0.253	0.229	0.211	**0.947**	0.326	0.200
	D3	-0.010	-0.137	-0.033	-0.041	0.104	0.055	0.127	**0.748**	0.146	0.030
	D4	0.123	-0.095	0.111	-0.187	0.195	0.194	0.148	**0.935**	0.322	0.213
Price (P)	P1	0.369	0.098	0.411	-0.236	0.387	0.507	0.507	0.167	**0.759**	0.431
	P2	0.291	0.132	0.396	-0.273	0.359	0.715	0.458	0.337	**0.903**	0.749
	P3	0.201	0.017	0.272	-0.176	0.208	0.411	0.334	0.317	**0.817**	0.424
Travel Intention (TI)	TI1	0.293	0.240	0.441	-0.167	0.424	0.774	0.426	0.195	0.645	**0.969**
	TI2	0.313	0.265	0.475	-0.153	0.428	0.760	0.418	0.182	0.652	**0.975**
	TI3	0.310	0.292	0.459	-0.154	0.398	0.718	0.373	0.150	0.597	**0.954**
	TI4	0.213	0.043	0.311	-0.196	0.299	0.663	0.399	0.286	0.663	**0.823**