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CUSTOMERS' PERCEIVED RISK & INTENTION TO VISIT RESTAURANTS DURING COVID-19: AN EMPIRICAL ANALYSIS IN PORTUGAL

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Master in Management

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This dissertation is more than an academic project. It represents the conclusion of an important chapter in my life.

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This journey made sense with you all in it. This is just the beginning, and I am genuinely excited about what is yet to come.

Thank you kindly.

Resumo

A presente investigação tem como objetivo evidenciar a forma como a intenção de visitar restaurantes por parte dos consumidores é afetada pela sua perceção de risco e pelos diferentes tipos de confiança demonstrados durante uma calamidade pandémica. A amostra foi composta por 530 consumidores de Portugal. Através de um questionário baseado na web, os dados recolhidos foram analisados por meio de análise de regressão. O questionário foi realizado quando, após meses de isolamento total, Portugal iniciou a reabertura faseada e com poucas restrições. Os resultados indicam que o risco de saúde percebido pelos consumidores, a solidariedade com a indústria de restaurantes, a confiança em restaurantes e na marca, e a confiança na imunidade predizem a intenção de visitar restaurantes durante o surto de Coronavírus. O risco de saúde percebido foi o fator mais preponderante, seguido da solidariedade. Considerando a tendência solidária do consumidor em apoiar os restaurantes, a confiança dos consumidores na marca dos restaurantes deve ser levada em consideração, principalmente para continuar a atrair os clientes frequentes. Todos os aspetos acima devem ser reconhecidos pelos restaurantes para lidar com a situação presente e superar futuras e potenciais adversidades. A adoção de novos recursos de resposta, com rapidez e precisão, substituirá o pensamento de longo prazo e vai ser a norma.

Abstract

The present research aims to reveal how consumers' intention to visit restaurants is affected by consumers' risk perception and different types of trust during a pandemic calamity. The sample was composed of 530 consumers from Portugal. A web-based questionnaire was administered and analyzed using regression analysis. The questionnaire was conducted when Portugal began phased reopening after months of total lockdown and with little restrictions. The results indicate that consumers' perceived health risk, solidarity with the restaurant industry, trust in a restaurant and brand, and immunity trust predict intention to visit a restaurant during the Coronavirus outbreak. The perceived health risk was the factor with the largest effect size, followed by solidarity. Considering consumers' solidary tendency to support the restaurants, consumers' brand trust in restaurants should be considered, mainly to attract frequent customers. Restaurants must recognize all the above aspects to cope with the present situation and overcome future and potential adversities. Adopting new response capabilities quickly and accurately will replace long-term thinking and become the norm.

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1   Introduction

On January 30, 2020, the World Health Organization (WHO) declared a state of global emergency due to the pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Li, Wang, Zhao, et al., 2020; Velavan & Meyer, 2020). The prevailing Coronavirus pandemic (COVID-19) has caused uncertainty and risk of an ensuing global recession in the hospitality sector (Fourodi et al., 2021). Nicola et al. (2020) suspected that hospitality and tourism are most likely the hardest-hit sectors. The same author stated that the COVID-19 outbreak has negatively impacted the restaurant industry and led to significant sales and job losses. Moreover, it is influencing customers' attitudes and behavior, it threatens their health (Min, Kim, and Yang, 2021). Previous researchers have started investigating Millennials' behaviors and attitudes because of their importance to industries (e.g., Nowak et al., 2006). Millennials represent a broad segment of the population with high purchasing powers (Nowak et al., 2006), making this cohort an exciting group to study.

Countries globally have adopted social distancing to contain the disease (Gursoy & Chi, 2020). Qureshi et al. (2020) identified social distancing as the prohibition of gatherings, instructions for people to stay at home, reduced urban mobility, and non-essential trade suspension. Indisputably, social distancing is promoted in the interest of public health and is necessary (Qureshi et al., 2020). Contradictorily, the measure dramatically affects the economy, especially in the restaurant industry (Song, Yeon, & Lee, 2021).

Globally, the number of seated restaurant dinners has been steadily increasing since the end of May 2020, coming close to the levels observed at the beginning of 2020 (Lock, 2020), demonstrating consumer interest in this service even during the pandemic. However, due to measures of social distancing and general caution in public places, the year-over-year decline of seated dinners in restaurants worldwide was a staggering 52.97 percent on February 23, 2021 (Lock, 2021). In recent studies, some positive aspects of the restaurant brand and consumers' perceived risk are part of their preferences for dining facilities in restaurants (Kim, Kim, & Wang, 2021; Kim & Lee, 2020). For example, sales of branded restaurants remained higher than that of non-branded ones after the COVID-19 pandemic. Accordingly, Berry (2000) declared customers rely heavily on brands when they are concerned with quality uncertainty. However, it is still unknown which factors drove consumers to visit restaurants during the pandemic, favoring its recovery.

Despite the massive impacts of the COVID-19 pandemic on the hospitality industry, limited papers that empirically examined consumers' risk perceptions of the current pandemic in restaurants' context have been published to date. With this background, this study hopes to cast light on the nature of the perceived risk towards a pandemic disease and how it impacts the intention to visit restaurants,

theoretically and managerially, by leveraging existing research in a novel industry, the Portuguese restaurant sector.

To fill this gap, the primary aim of this research is to reveal how consumers' intention to visit restaurants is affected by consumers' risk perception and different types of trust during the COVID-19, contributing new results to recently published studies. Motivated by the uncertainties and the impact of the pandemic on the Portuguese restaurant industry sector, the study contributes to the literature on managing the risk perceptions of consumers and the health and economic areas. The final purpose is to provide evolution and refinement in understanding a pandemic situation and bring hope to the Portuguese economy, especially the hospitality sector that is being affected substantially.

 Hence, this study explores the following research objectives:
- To extend the literature, given the novelty of the virus and the limited studies existence;
- To analyze consumer's perceived risk and intentions to visit restaurants in Portugal during COVID-19;
- To reach a relevant conclusion at the end of the research as a significant contribution to the restaurant industry development and recovery, particularly in Portugal.

Above all, this study will make meaningful contributions to the hospitality, marketing, and tourism literature. First and foremost, this study represents a pioneering effort to unveil the consequences of COVID-19, an unfolding global pandemic, in the Portuguese restaurant industry. These estimates can be used to better evaluate economic effects for restaurant businesses and forecast customers' behavior based on different pandemic scenarios. Associated with the uncertainty subsists the need to assess the lasting impacts of COVID-19 to help restaurants better understand, prepare for, and recover from this public health calamity. Lastly, it is acknowledged that consumers were reluctant to visit restaurants due to stockpiling materials or going to extremes to avoid other people (Kim & Lee, 2020). Therefore, it is important to consider the factors that might restore consumer intentions to visit restaurants under these present circumstances.

How will this global pandemic shape the future of the restaurant industry? Is there an imminent recovery ahead?

2 Literature review & Hypotheses Development

2.1 Theoretical Background

2.1.1 The Impact of COVID-19 in the Restaurant Industry

A pandemic is one of the major challenges that modern-day society can face (Osterholm, 2005). This has been well known before the emergence of the COVID-19 outbreak that has unprecedentedly shaken the world (Yang, Liu, & Chen, 2020). At the time of writing, the confirmed cases approached 260.867.011 million, with over 5.200.267 million deaths worldwide a total of 7.772.799.316 vaccine doses have been administered (29 November 2021; WHO, 2021), increasing global economic anxiety (Torales et al., 2020), drastically impacting the hospitality industry.

Restaurants' closure and an expectation that social distancing will remain a primary measure to constrain COVID-19 at least for several months imply that restaurants will likely face problems recovering (Gössling et al., 2020). Restaurants have had to learn a new way of conducting business while remaining safe by implementing new rules and regulations concerning hygiene and social distancing; these rules and regulations have become the new norm for the industry (Breier et al., 2021).

Mishra and Rath (2020) observed from other past crises, the sector's crisis resulting from COVID-19 can promote behavioral responses to absorb the shock of the imposed reality, awakening feelings of solidarity. Concerning the well-being of others is what is acclaimed as solidarity (Davies & Savulescu, 2019). Social solidarity involves collective responsibility for promoting the well-being of members of the group and community at large (Paskov & Dewilde, 2012) and emphasizes taking care of the needs and interests of the underprivileged members of the group (Reichlin, 2011). The effect of social solidarity may be more substantial, especially for those most distant from social inequality situations, since the presence of this inequality undermines solidarity (Mishra & Rath, 2020).

Thus, the current situation under the new pandemic is unknown and full of challenges and uncertainty (Foroudi et al., 2021). Notwithstanding, Gössling et al. (2020) remark that there is some evidence that COVID-19 is different from the previous outbreak crisis, that an enormous transformation will follow it in the tourism sector. Therefore, tackling the pandemic and its effects requires global cooperation and solidarity in development assistance (Schneider et al., 2021). When worries recur and government trust simultaneously decreases, public support for global solidarity may wane (Schneider et al., 2021). Based on this theoretical background, the following hypothesis is proposed:

H1. Solidarity is positively related to the intention to visit restaurants during the pandemic.

2.1.2 The COVID-19 Risk Perception

Previous studies defined risk perception as a person's feeling towards any imminent shock or hazard that can lead to negative repercussions (Ali Chisty et al., 2021). Risk perception is one of the major components of understanding how people evaluate and cope with an adverse event (Ali Chisty et al., 2021; Ho, Shaw, Lin & Chiu, 2008).

In this context, if the Coronavirus outbreak was perceived as a low-risk health emergency, people would not change their attitudes, which might increase the severity of the situation (Abir et al., 2020). Thus, the correct perception of the risk of COVID-19 is essential to introduce positive health attitudes among people (Abir et al., 2020).

2.1.2.1 Millennials & Risk Perception

According to Madiba and Roberts-Lombard (2011), Millennials are referred to as those born between 1975 and 2000. Moreover, this concept has been a topic of discussion among researchers, with 1980 being one of the earliest starting ages (Strauss & Howe, 2000) and 2002 being the latest ending age (Sago, 2010). As states Nowak et al. (2006, p. 316), this cohort is "also referred to as the Generation Y, Nexters, and Echo Boomers – the later title is a tribute to the claim that they are primarily the children of the baby boomers."

Millennials are considered demanding consumers expecting a large variety of items, personalization, and customization of goods and services (Ansari & Mela, 2003; Bitner et al., 2000). As the first digitally native generational cohort with exceptional technology skills, it is evident that Generation Y customers represent huge consumption potential and spending power (Moreno et al., 2017; Norum, 2003).

According to Ferrer et al. (2018), risk perceptions are based on learned associations and are closely linked to previous experiences. This indicates that each generational cohorts' intentions to employ protective attitudes may differ as each possesses a unique set of values and beliefs. Soares et al. (2017) evidence that the 9/11 terrorist attacks in 2001 produced social, political, and economic after-effects on Generation X members and Millennials, while members of Generation Z were too young to understand the magnitude of the event. Also, Millennials were strongly influenced by the height of the economic recession in 2008. This suggests that different generations may perceive the risk associated with COVID-19 and respond to events differently. Moreover, younger generations show more resistance towards complying with the proposed protection measures and other public health guidelines (Nivette et al., 2021; Park et al., 2020; Webster et al., 2020).

2.1.2.2 Disease Denial

As the pandemic progressed worldwide, there was massive dissemination of novel information every day (Hakim et al., 2021). Wong et al. (2021) realized that COVID-19-related information on social media is overabundant and doubtful, resulting in an "infodemic." Amid rumors and fake news have led to anguish and anxiety in people (Torales et al., 2020). At the same time, there has been a high degree of skepticism and mistrust regarding the information provided by various media outlets (Taha et al., 2014).

Denial is the refusal to recognize an unpleasant truth or emotion or the failure to acknowledge that truth (Denial, 2021). According to Basch (1983), denial is defined as a defense mechanism for rejecting reality in response to a threatening environment/situation. From the past pandemics and pandemics, transmission indices have shown that disease denial stands a challenge for epidemiologists in the fight against disease prevention and control.

In this context, denial has been translated into non-belief in the disease. In previous studies, disease denial will make the perceived benefits of visiting a restaurant salient (Hakim et al., 2021). This may happen due to a low perceived probability of contracting the disease (COVID-19) but mainly by a low perceived consequence or threat (Kim & Lee, 2020). For this reason, it is assessed the risk perception of COVID-19 as a disease denial factor.

Drawing from the previous literature, the following hypotheses are proposed:

H2. Perception of the Coronavirus pandemic is negatively related to the intention to visit restaurants during the pandemic (H2a) and moderate the effect of disease denial in the intention to visit restaurants during the pandemic (H2b).

H3. Perceived Health Risk is negatively related to the intention to visit restaurants during the pandemic.

H4. Disease denial is positively related to the intention to visit restaurants during the pandemic.

H5. Age is negatively related to the intention to visit restaurants during the pandemic (H5a) and moderate the effect of disease denial in the intention to visit restaurants during the pandemic (H5b).

2.1.3 Social Trust

Several countries have successfully reduced their COVID-19 infection rate early, while others have been devastated (Hakim et al., 2021). Possible explanations for the differences are complicated, but response efficacy has in part depended on the speed and scale of governmental intervention and how communities have received, perceived, and acted on the information provided by governments and other agencies (Hakim et al., 2021). Therefore, when uncertainty appears, people rely on institutions

(i.e., Government, healthcare providers, universities) to reduce their anxiety towards an uncontrollable threat (Hakim et al., 2021).

How a health system has performed in the past, and the perceived values that it holds, play a substantial role in building trust. According to Heidi et al. (2018), concepts such as benevolence, fidelity, and morality between individuals and a trusted party are closely related to social trust. An example is if a system discriminates against a particular population, that population will likely lose trust in the system, which has implications for trusting and accepting the health information and its future interventions. Other authors described social trust as "the willingness to rely on those who have the responsibility for making decisions and taking actions related to the management of technology, the environment, medicine, or other realms of public health and safety" (Siegrist, Cvetkovich, & Roth, 2000; p. 354).

Government policies affect the perceived threat of COVID-19 and its attendant economic, social, and psychological stressors (Koch & Park, 2021). Previous studies of natural crises exhibit the fear of a lack of adequate Government measures for the restaurant business (Runyan, 2006). Therefore, building trust is important for governments implementing difficult policy responses during a crisis (Goldfinch et al., 2021). A body of research suggests trust in Government reflects perceived governmental performance (Gustavsen, Røiseland, & Pierre, 2014). Rudolph and Evans (2005) found out that people are willing to accept personal risks or sacrifices alongside uncertainty when given the impression that their government is trustworthy.

In Portugal, the Government, the Security Forces, and the Economic and Food Safety Authority (*Autoridade de Segurança Alimentar e Económica* in Portuguese) are the central authorities responsible for defining guidelines to mitigate the risk and to reinforce inspections measures. Hence, public compliance with health authorities' recommendations is critical to successful risk management in pandemic situations (Siegrist et al., 2021).

Recent study findings demonstrate that trust in the Government and the Health Surveillance authorities can provoke contradictory attitudes and feelings (Hakim et al., 2021). Therefore, the following hypotheses are:

H6. Government trust is positively related to the intention to visit restaurants during the pandemic (H6a), while Health Surveillance trust is negatively related to the intention to visit (H6b)

H7. Government trust is positively related to disease denial (H7a), while Health Surveillance trust is negatively related to disease denial (H7b).

2.1.4 Immunity Trust

Immunological memory refers to the process of protecting one's body from a subsequent infection (Dan et al., 2021). Therefore, understanding the immune memory of individuals infected with the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is critical for developing effective vaccines, improving the diagnosis, and monitoring infections caused by this highly infectious disease.

Data accumulated from patients suggest that older adults have higher mortality rates and constitute a larger proportion of the patients (Martín-Sánchez et al., 2020). However, most people infected with SARS-CoV2 do not require hospitalization (Wu and McGoogan, 2020). At the same time, some individuals with mild illness may develop functional immune cells that can protect them against future infections. Although a vaccine is needed to safely reach herd immunity against SARS-CoV-2, understanding how natural infection can trigger an immunological memory that could affect the severity and transmission of pandemic diseases is critical to preventing this illness.

A longitudinal study by Rodda et al. (2021) discovered that infected individuals with COVID-19 developed a resilient and protective immune system response against the virus after three months. Studies show that the production of antibodies can last for at least three months (Ripperger et al., 2020). It has also been suggested that the duration of immunity can vary widely (Ibarrondo et al., 2020), which indicates the need for follow-up studies (Callow et al., 1990; Baumgarth et al., 2020).

The rapid loss of immunity in people infected with SARS-CoV-2 could trigger the development of new neutralizing variants (Greaney et al., 2020), which demonstrates that this pandemic will stay for a long time. In this sense, the researcher decided to include the "immunity trust" factor that may predict the intention to visit restaurants. Based on this theoretical background, the following hypotheses are proposed:

H8. Immunity trust is positively related to the intention to visit restaurants during the pandemic (H8a) and moderate the effect of disease denial in the intention to visit restaurants during the pandemic (H8b).

2.1.5 Brand Trust

Hiscock (2001, p. 1) has claimed that "the ultimate goal of Marketing is to generate an intense bond between the consumer and the brand, and the main ingredient of this bond is trust." Moorman, Deshpande, and Zaltman (1993) define trust as "a willingness to rely on an exchange partner in whom one has confidence" (p. 315). Trust, therefore, is a critical factor between two parties in a successful relationship (Zeren and Kara, 2020). Chaudhuri and Holbrook (2001) define brand trust as consumers' willingness to rely on the brand to realize its stated promise.

Trust plays a vital role in developing and maintaining brand loyalty in both situations, i.e., consumer-to-business and business-to-business buying situation (Azfal et al., 2010). Similarly, Aydin and Ozer (2005) and Dehdashti, Kenari, and Bakhshizadeh (2012) reported that trust is the most important antecedent of brand loyalty because it creates an ongoing process for continuation and maintenance of the relationship. Therefore, trust is built upon the basis of past experiences. Along these lines, trust includes feelings that consumers can rely upon the company, and the lack of such feelings leads to hesitations in getting into exchanges with companies (Barbalet, 1996).

Past research on brand trust has supported that a high level of trust in a brand leads to brand repurchase, satisfaction, loyalty, and commitment (Delgado-Ballester and Munuera-Alemán, 2005; Wang, 2002; Delgado-Ballester et al., 2003). Customer trust and loyalty towards a brand have traditionally been fundamental determinants of long-term positive customer behavior (Amoroso et al., 2021). The more satisfied and loyal a customer is to a brand, the greater is their repurchase intention and, ultimately, the brand wealth (Amoroso et al., 2021). In this way, brand associations positively affect brand reputation, a decisive factor in shaping brand trust (Han, Nguyen, & Lee, 2015).

From this perspective, well-known restaurants and those frequented by many consumers generate a feeling of trust (Hakim et al., 2021; Mitchell & McGoldrick, 1996). It is said that consumers assess the risk of eating in those restaurants as extremely low, similar to the risk they attribute to eating in their homes (de Andrade, Rodrigues, Antongiovanni, & da Cunha, 2019). On top of that, consumers often use different mechanisms to mitigate the risks, uncertainties, and anxiety related to choices. Among the various mechanisms described in prior studies, brand and restaurant trust are major positive factors affecting consumers' intentions (Lacey, Bruwer, & Li, 2009; Mitchell & McGoldrick, 1996). In a recent study, it was observed that consumers could not differentiate restaurants regarding food safety, using feelings of affection, familiarity, social identity, and other factors instead to help them choose a place to eat (de Andrade, Rodrigues, Antongiovanni, & da Cunha, 2019). In China, it was discovered that branded restaurants had more sales than non-branded restaurants during the COVID-19 outbreak (Kim et al., 2021).

In substance, the consumers' behavior might be shaped due to familiarity with the place, with a heuristic feeling of affection and social identity (Fischer & Frewer, 2009; Tiozzo et al., 2017). Thus, it is explained by the greater confidence in those establishments' food services, and as a result, the risk perception is diminished (Fischer & Frewer, 2009; Tiozzo et al., 2017). Therefore, the restaurants' brand trust can increase consumers' intention to visit them. This leads to the following hypothesis:

H9. Brand trust is positively related to the intention to visit restaurants during the pandemic.

2.2 Proposed Research Model

The proposed research model (**Figure 1**) was established to gain a comprehensive understanding of consumers' intention to visit a restaurant during the pandemic, based on risk perceptions and different types of trust.
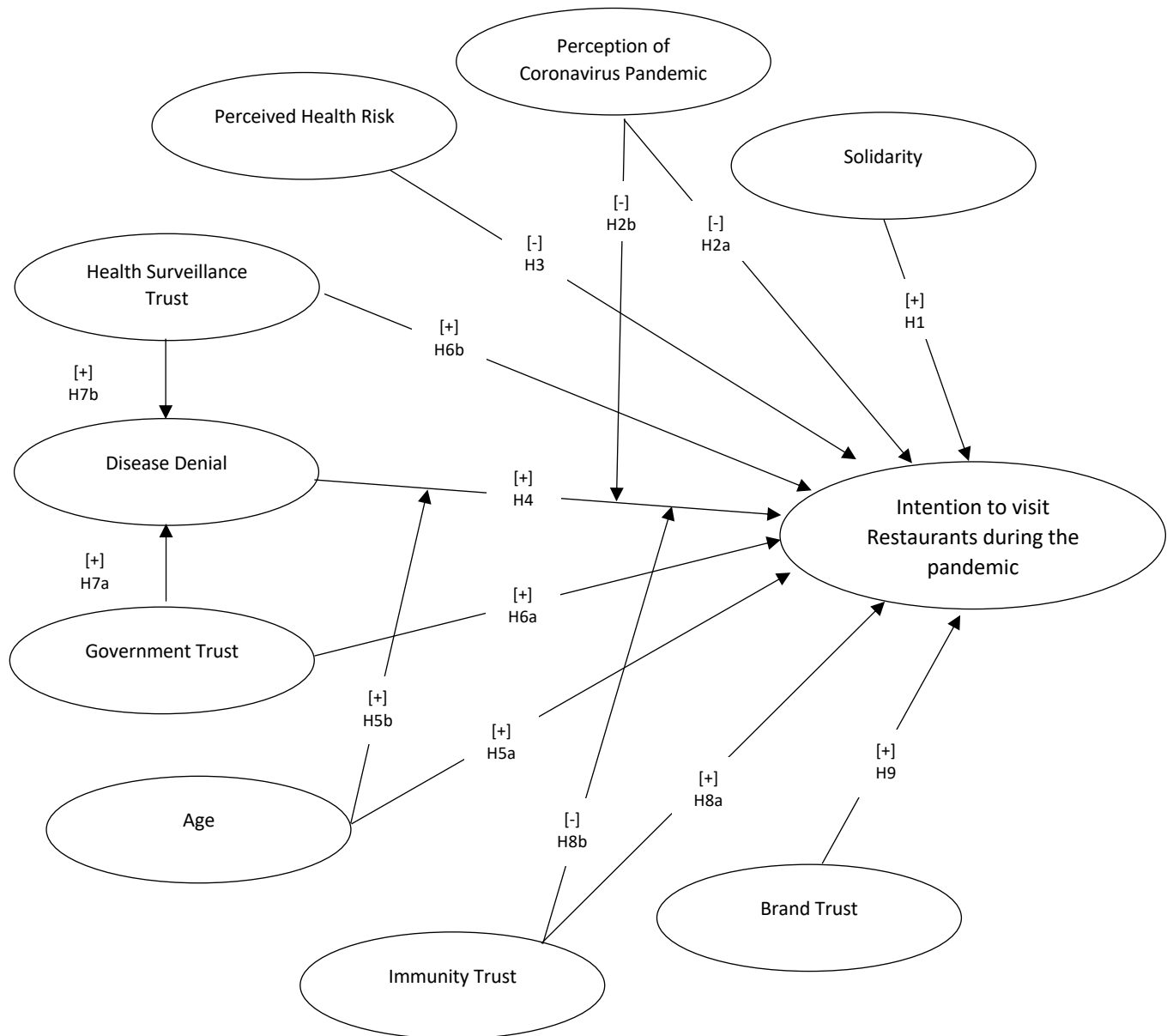
Figure 1 – Proposed Model

Source: Author's elaboration

3   Methodology

3.1   Research Context

The current research examines and understands the consumers' perceived risk and their intention to visit restaurants in Portugal during the Coronavirus pandemic.

3.2   Research Design

The present study made use of a quantitative research method to address the research objectives. For that matter, the researcher conducted a web-based questionnaire (attached in Appendix A) used as the research instrument. Based on the literature, it is widely known that Millennials are tech-dependent (Moreno et al., 2017; Moore, 2012; Norum, 2003), so selecting this method will give a higher chance of reaching the desired target audience.

The survey was created using the online platform Qualtrics, which allows unlimited answers indefinitely, apart from being mobile-friendly and intuitive. It was divided into five parts: (1) consent; (2) general information; (3) the domain and items of the constructs in the extent literature; (4) sociodemographic profile. In this study, the questionnaire comprises various closed-ended questions to acquire initial insights regarding the problem and obtain several respondents' demographic and psychographic characteristics.

A questionnaire was administered to evaluate consumers' perceptions of risk and trust related to the COVID-19 pandemic and the reopening of the restaurants. The questionnaire had 43 items and was adapted based on several studies and data (Bolek, 2020; de Jonge et al., 2004; Foroudi et al., 2021; Hakim et al., 2020; Ngo, Liu, Moritaka, & Fukuda, 2020; Omari, Ruivenkamp, & Tetteh, 2017). As studies with some constructs of interest (i.e., immunity trust) were not found, new questions were created for this purpose. One 7-point Likert scale was used to measure the items: an agreement scale ranging from 1 (Strongly disagree) to 7 (Strongly agree).

The questionnaire was designed to evaluate the following latent variables: Perception of Coronavirus Pandemic, Social Trust (divided into Government Trust and Health Surveillance Trust), Solidarity, Disease Denial, Perceived Health Risk, Immunity Trust, Brand Trust, and Intention to visit restaurants.

Furthermore, this study used a cross-sectional design since the participants responded only once to the online questionnaire. Attributes of cross-sectional design include cost and time efficiency.

3.3 Population and Sample

The concept of *population* encompasses all elements and characteristics of the subject of study (Aaker et al., 2004). The research universe comprises individuals living in Portugal between 1974 and 2000 who intend to visit a restaurant during the Coronavirus outbreak. Other born age groups were covered besides Millennials to compare the younger and adult populations to obtain a more significant contribution. The inclusion criteria were as follows: aged 18 or over; living in Portugal at the time of the study; giving their informed consent to participate in the questionnaire; could speak and read Portuguese or English; and having access in isolation to electronic equipment. However, due to the excess number of the universe, lack of sampling frames, and time constraints, a non-random sampling method was used.

Convenience sampling was used to select the sample for the study. According to Bornstein et al. (2013), the most common non-probability sampling technique used within developmental science is convenience sampling. The same author defines convenience sampling as a method where participants are selected ad hoc based on their accessibility or proximity to the researcher.

Once the self-administered questionnaire was shared, the researcher was able to obtain a sample of 604 individuals in total. Of those consumers, 74 had important missing information and were therefore excluded from the analysis, leaving a final sample of 530 consumers with adequate information.

3.4 Pre-test

Before proceeding with the application of the final questionnaire, a pre-test was carried out. In this step, 54 participants responded between the 20th and 23rd of April 2021. The goal of the pre-test is to verify the applicability of the questionnaire, verify the time spent, evaluate the order of the questions, establish any necessary adaptations concerning difficulties by respondents to introduce improvements through the suggestions presented.

Additionally, Cronbach's Alpha was used, which allowed evaluating the internal consistency of each item, and whose results are presented in **Appendix B**. According to the information collected, there were slight doubts regarding the interpretation of some questions, so small semantic changes were made. Some structural changes were also necessary, namely introducing a bar that allowed respondents to know which part of the questionnaire they met.

3.5 Data Collection and Treatment

With the development of the Internet, some researchers in hospitality and tourism fields use online surveys to efficiently reach broader populations of interest (Han, Hsu, & Lee, 2009; Kim & Ok, 2009).

The questionnaire was distributed and collected online from the 25th of April until the 10th of May of 2021. Participation was voluntary. The survey was also supplemented by the aim of the research and guaranteed the confidentiality of data. All participants signed an informed consent form electronically.

Concerning data processing and analysis, it was executed using the computer programs Microsoft Excel (Excel Version 2009) and IBM SPSS (SPSS Version 27.0, 2021). Microsoft Excel was used to reduce data redundancy and clear the database, transforming its values into a numerical form, which could easily be exported into SPSS. In SPSS, frequency distributions and mean values were given as one of the descriptive statistical analyses.

3.5.1 Statistical Techniques for Quantitative Analysis of the Collected Data

In addition, SPSS was used to perform statistical techniques for quantitative analysis of the collected data: Principal Component Analysis and Regression Analysis.

3.5.1.1 Principal Component Analysis

The Principal Component Analysis (PCA) is practical when the dataset is large and multiple variables need to be analyzed (Bro & Smilde, 2014). PCA is a dimension-reduction tool that can reduce the dimension of datasets, allowing to increase interpretability and minimize information loss (Jolliffe and Cadima, 2016). This process is done by a linear transformation of the original set of attributes into a smaller set of attributes called principal components (PCs). In this study, PCA will be used to reduce the complexity of the information and thus to be able to carry out the linear regression models. It is acknowledged that PCA is a pre-analysis of the variables of interest and plays the role of an analytical bridge to conduct additional analysis.

Applying the PCA requires checking assumptions. First, it must be ensured that the variables used are metric (measured with interval or ratio scale). In this case, this situation is verified since a Likert scale from 1 to 7 was used. It is not a metric variable, but it could be treated as one. Second, the sample size is important even if there is no general agreement in the literature regarding the number of observations and the ratio between the sample size and the number of variables (Williams, Brown, and Onsman, 2010). However, the number of observations has to be bigger than the number of variables included in the analysis, with the mention that large samples can lead to more accurate results. Finally, Kaiser-Meyer-Olkin Measure of Sampling Adequacy or simply KMO and Bartlett's Test of Sphericity must be done to understand if there are correlations strong enough to apply PCA. According to some sources, the recommended value for the KMO test is greater than 0.500 (Field, 2005). Also, Bartlett's Test of Sphericity should be significant ($p<0.05$).

In this case (see Table 3), the KMO values are >0.500 indicating a moderate level of adequacy. Then, as expected, Bartlett's Test of Sphericity shows high significance, indicating that at least one correlation among the variables is significant. Thus, the PCA analysis is relevant.

Construct	KMO	Sig.
Perception of Coronavirus Pandemic	0,637	0,000
Disease Denial	0,798	0,000
Government Trust	0,619	0,000
Health Surveillance Trust	0,819	0,000
Immunity Trust	0,665	0,000
Solidarity	0,748	0,000
Brand Trust	0,549	0,000
Perceived Health Risk	0,757	0,000
Intention to Visit	0,841	0,000

Table 1 – Verification of the third assumption for applying PCA for each construct

Source: Author's elaboration using SPPS outputs

3.5.1.2 Regression Analysis

Regression Analysis is a statistical tool for investigating the relationship between variables.

The difference between simple linear regression and multiple linear regression is that there is a linear relationship between the dependent variable and the independent variable in a simple linear regression model. A multiple linear regression model has a linear relationship between the dependent variable and the various independent or explanatory variables. Sometimes, the contribution of a single independent variable does not alone suffice to explain the dependent variable. If this is so, one can perform a multivariable linear regression to study the effect of multiple variables on the dependent variable.

In the mathematical-statistical model of multiple linear regression (MLRM):

- all the independent variables take part at the same time in the statistical model;
- the value of R and R^2 determines the strength of the correlations between the independent and dependent variables.

The present investigation includes **two multiple linear regression models**, as shown below:

Disease Denial = $B_0 + B_1$ * Government Trust + B_2 * Health Surveillance Trust + ε_1

Intention to visit = $B_0 + B_1$ * Solidarity + B_2 * Perception of Coronavirus Pandemic + B_3 * Perceived Health Risk + B_4 * Disease Denial + B_5 * Age + B_6 * Health Surveillance Trust + B_7 * Government Trust + B_8 * Immunity Trust + B_9 * Brand Trust B_{10} * Disease Denial * Age + B_{11} * Disease Denial * Perception of Coronavirus Pandemic + B_{12} * Disease Denial * Immunity Trust + ε_3

4 Results

4.1 Sample Profile

Related to the sociodemographic characterization of the respondents, are outlined above and reported in full in **Table 2**.

Variables		Frequency	Percent
Gender	Male	189	35,7
	Female	341	64,3
	18-25	329	61,9
	26-35	82	15,5
Age	36-45	38	7,2
	46-55	39	7,4
	> 56	43	8,1
	Primary or Elementary School	6	1,1
	High School	71	13,4
Level of Education	Bachelor	226	42,5
	Post-Graduation	46	8,7
	Master	173	32,6
	PhD	9	1,7
	Student	146	27,5
	Student-Employee	91	17,0
	Employee	232	43,8
Occupation	Self-Employed	37	7,0
	Unemployed	11	2,1
	Housewife	10	1,9
	Retired	4	0,8
	Açores	2	0,4
	Aveiro	5	0,9
	Beja	1	0,2
	Braga	2	0,4
	Castelo Branco	4	0,8
	Coimbra	10	1,9
	Évora	4	0,8
	Faro	7	1,3
	Guarda	1	0,2
Residence District	Leiria	13	2,5
	Lisboa	381	71,7
	Madeira	9	1,7
	Porto	21	4,0
	Portalegre	1	0,2
	Santarém	20	3,8
	Setúbal	44	8,3
	Viana do Castelo	1	0,2
	Vila Real	2	0,4
	Viseu	3	0,6

Table 2 – Demographic Profile (N = 530)

Source: Author's elaboration using SPPS outputs

The present sample is composed of 530 respondents. Of those, 62% of the answers represent the individuals aged between 18 and 25, representing the age group with greater preponderance within the study. Along these lines, there is an excess of individuals under 25 years of age and a vast deficit of individuals over 60 years of age. This happens because the survey was distributed in digital format, which hampered the presence and contribution of the more senior individuals who are not as present on social media as younger people.

As for the gender distribution of respondents, the sample consists of 64,3% female and 35,7% male. There is no record of respondents who did not wish to disclose their gender.

Regarding the level of education, it can be said that most respondents have educational qualifications either at secondary education level, that is, 14.5% of respondents, or at higher education level, having a bachelor's level (42,6%) or a master's level (32,6%).

The main conclusions drawn about the professional situation of the respondents indicate that more than half are employed, whether being an employee (43,8%) or a student-employee (17%) with few "unemployed," "housewives," and "retired" about 2,1%, 1,9%, and 0,8% respectively. In addition, with a significant percentage, there are the students (27,5%).

Additionally, the vast majority of the respondents live in Lisbon (71,7%). The rest of the Portuguese districts had few participants, that is, below 8% or lower.

4.2   Relationship of Respondents with Restaurants

The questionnaire includes a set of questions that aim to outline, in general, the profile of respondents related to the theme.

In **Table 3**, it can be observed, the distribution of respondents is relative to the frequency of visits.

Concerning the frequency of visiting restaurants before the Coronavirus outbreak, only a tiny percentage (1,5%) answered "Never." On the contrary, the remaining participants communicated that visited restaurants "Between four and six times per month" (31,9%) or "Three times per month" (18,5%).

As regards the present and knowing the existence of the COVID-19, when asked about planning to visit a restaurant in a three-month time horizon, the general response was very positive: "Definitely yes" (55,8%) and "Probably yes" (26%), resulting in a total of 81% of the sample.

Variables		Frequency	Percent
How often did you use to visit restaurants	Once per month	68	12,8
	Twice per month	74	14,0
before the Coronavirus outbreak?	Three times per month	98	18,5
	Between four to six times per month	169	31,9
	Between seven and ten times per month	57	10,8
	More than ten times per month	56	10,6
	Never	8	1,5
Are you planning on visiting a restaurant	Definitely not	4	0,8
	Probably not	28	5,3
within the next three months?	Might or might not	64	12,1
	Probably yes	138	26,0
	Definitely yes	296	55,8
How often would you visit restaurants	Once a month	114	21,7
	Twice a month	121	23,0
within the next three months?	Three times per month	97	18,4
	Between four to six times per month	130	24,7
	Between seven and ten times per month	40	7,6
	More than ten times per month	24	4,6

Table 3 – Distribution of respondents by frequency of visit and intention to visit in the next three months

Source: Author's elaboration using SPPS outputs

It was also asked about the willingness of respondents to visit restaurants in the next three months during the pandemic outbreak and their intention to go to restaurants before the Coronavirus outbreak. Surprisingly, some respondents were still willing to visit them "Between four and six times per month" (24,7%).
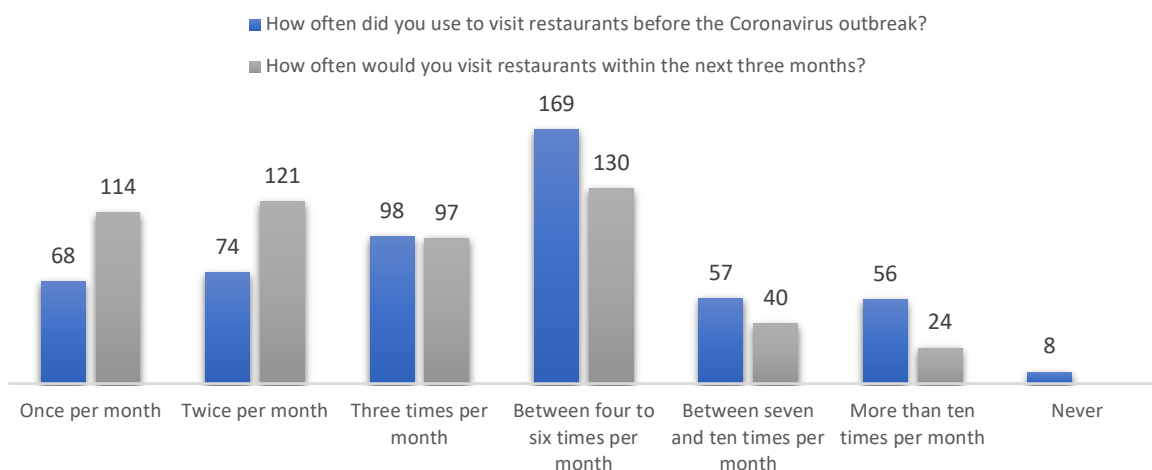
Figure 2 – Comparison of frequencies visiting restaurants before and during Coronavirus outbreak

Source: Author's elaboration using SPPS outputs

As shown in **Figure 2**, it can be concluded that comparing both the frequency of visits to restaurants before and during the COVID-19, there was a considerable decrease in the number of

intended visits per month. What could have caused that? Was it fear? Was it trust in information spread by the Government? Was it related to restaurants' hygiene?

4.3 Information Reduction

To estimate the different multiple linear regression models, it was necessary to simplify the data structure, that is, to reduce the number of existing items to measure each construct. To this end, an analysis of PCs was carried out, and an analysis of the internal consistency measured using Cronbach's Alpha was carried out (see **Table 4**).

The PCA aims to describe the information contained in a dataset in a smaller one. As each construct was unidimensional, the objective was to extract a component for each one, which was possible given that the explained variance criterion was verified (see **Table 4**). This criterion suggests the retention of PCs with more than 70% to 80% explained variance. Nevertheless, since it is a study in social sciences, this percentage can be around 60%. Thus, for each construct, a component was obtained.

Construct	Explained Variance (%)	Cronbach's Alpha
Perception of Coronavirus Pandemic	68,096%	0,721
Disease Denial	62,884%	0,538
Government Trust	71,526%	0,825
Health Surveillance Trust	77,265%	0,896
Immunity Trust	60,701%	0,673
Solidarity	93,530%	0,955
Brand Trust	60,741%	0,696
Perceived Health Risk	67,144%	0,833
Intention to Visit	85,01%	0,864

Table 4 – Verification of Internal Consistency and Main Components Extraction Criteria

Source: Author's elaboration using SPPS outputs

Additionally, the commonalities, that is, the proportion of variance of each item that is explained by the retained component, were also good, as by looking at **Appendix C** globally, it is possible to conclude that the reduction in the number of variables forced by the PCA, did not entail a great loss of information, since the commonalities of all variables are at least greater than 0.4 (highest commonality was registered in a variable of the Solidarity component = 0.921; lowest commonality was verified for the Brand Trust component = 0.444)

In **Appendix C**, the values of the loadings are contemplated, that is, the values that appear in the Matrix of Components. This matrix allows us to see how related the initial variables are with each component, and the objective is to create a simplified structure or a solution in which, for

each component, the correlations of the initial variables are maximized. Therefore, after excluding two variables from the Immunity Trust construct and one variable from the Perceived Health Risk construct, all loadings are greater than 0.5 (highest loading was registered in a variable of the Solidarity component = 0.980; lowest loading was registered in Brand Trust = 0.666).

4.4   Hypotheses Testing and Validation

This section is intended to respond to the problems inherent in the structure of relationships between the constructs. In this sense, two multiple linear regression were estimated, whose objective is linked to the need to assess the existence of a relationship between a dependent variable and a set of independent variables. To do so, a set of assumptions that were verified in its entirety must be validated. It should be noted that since Principal Components were carried out, the assumption of normality is verified from the beginning.

Before carrying out any regression analysis, it is advisable to carry out an exploratory analysis to determine whether there are correlation between the variables under study. **Appendix D** summarizes the correlations between all the variables under investigation. There is a negative linear correlation in the Disease Denial Model, different from zero, with low values for the relationships between Government Trust (highest value -0,432) and Health Surveillance Trust (lowest value -0,193), showing weak correlations. Besides being a long and complex model, the Intention to visit Model precisely indicates the existence of positive and negative and relatively moderate correlations between all the variables under study. For this reason, and to improve the variability of the model, with the stepwise method, it was decided to exclude the following variables: Disease Denial, Government Trust, Health Surveillance Trust, and Age.

Another assumption that was verified was the absence of correlation between the residuals measured by the Durbin-Watson test, which has the null hypothesis that the errors are independent, and whose statistic varies between 0 (extreme positive autocorrelation) and 4 (extreme negative autocorrelation), concluding the inexistence of autocorrelation and therefore the independence of errors whenever the value of this statistic approaches 2. Now, by **Appendices E and F**, this assumption is verified. It should be noted that all tests presented in these appendices have a significance level of $\alpha = 0.05$.

Additionally, for multiple linear regressions, the assumption of the absence of correlation between the independent variables was verified for all models, that is, the absence of multicollinearity. Thus, for this assumption to be verified, there must be values greater than 0.1 of the Tolerance (TOL) measure and less than 10 of the Variance Inflator Factor (VIF). It can be observed in **Table 5** that this assumption was also verified.

Model		R²	Independents Variables	Unstandardized Coefficients		Standardized Coefficients $\hat{\beta}$	TOL	VIF
				$\hat{\beta}$	Std. Error			
1	Disease Denial	,192	Constant	1,326E-16	,039			
			Health Surveillance Trust	,089	,048	,089	,659	1,517
			Government Trust	-,484	,048	-,484	,659	1,517
2	Intention to visit	,530	Constant	-2,319E-18	,030			
			Perceived Health Risk	-,596	,035	-,596	,722	1,385
			Solidarity	,231	,034	,231	,784	1,275
			Brand Trust	,127	,031	,127	,921	1,086
			Immunity Trust	,101	,030	,101	,975	1,025
			Perception of Coronavirus	,081	,033	,081	,807	1,240

Table 5 – Summary of Linear Regression Models explaining the Conceptual Research Model

Source: Author's elaboration using SPPS outputs

4.4.1 Results obtained about Disease Denial

To understand to what extent the Government Trust and Health Surveillance Trust determine Disease Denial, a Multiple Linear Regression Model was estimated (**Appendix E** and **Table 5**).

The overall validity of the model (ANOVA test) immediately evidenced the explanatory power of only the Government Trust variable on Disease Denial (Sig. <0.05). For this reason, Government Trust and Health Surveillance Trust only explain 19,2% of the variability of Disease Denial, with Government Trust being the most relevant one ($\hat{\beta}$= -0,484). Even so, and although the Government Trust has a significant impact, however, it is positive.

In this way, the following hypotheses of the conceptual research model are not verified: H7 (H7a and H7b).

4.4.2 Results obtained about Intention to visit

The last model to be studied and the most complex aims to understand the extent to which Perceived Health Risk, Solidarity, Brand Trust, Immunity Trust, and Perception of Coronavirus Pandemic determine the consumers' intention to visit restaurants in Portugal. The results of the Multiple Linear Regression Model are shown in **Appendix E** and **Table 5**.

After excluding the variables with the lowest correlations, this model was also valid (ANOVA test: Sig. <0.05), as the coefficients of all the independent variables help explain the dependent variable – Intention to visit. Consequently, the research hypotheses H4, H6 (H6a and H6b) represented in the conceptual model of the investigation cannot be accepted.

The regression quality was shown to be reasonable, as the variables Perceived Health Risk, Solidarity, Brand Trust, Immunity Trust, and Perception of Coronavirus Pandemic contribute in 52,6% to explaining the variability of Intention to visit. However, the dimension with the lowest impact on Intention to visit is Perception of Coronavirus Pandemic ($\hat{\beta}$ = +0,081). On the contrary, Perceived Health Risk presents itself as the dimension with the greatest impact on Intention to visit ($\hat{\beta}$ = -0,596). Thus, the latest research hypotheses (H1, H3, H8a, and H9) of the conceptual research model are verified (summarized in **Table 5** and **Table 6**).

Hypothesis	Description	Coefficients Values	p	Supported?
H1	Solidarity → Intention to visit	0,231	**p<0.001**	**Supported**
H2a	Perception of Coronavirus Pandemic → Intention to visit	0,081	0.016	Not Supported
H2b	Moderated effect of Perception of Coronavirus Pandemic in Disease Denial	-0,020	0.554	Not Supported
H3	Perceived Health Risk → Intention to visit	-0,596	**p<0.001**	**Supported**
H4	Disease denial → Intention to visit	-0.18	0.615	Not Supported
H5a	Age → Intention to visit	0.12	0.705	Not supported
H5b	Moderated effect of Age in Disease Denial	-0.020	0.560	Not supported
H6a	Government trust → Intention to visit	0.036	0.244	Not Supported
H6b	Health Surveillance trust → Intention to visit	0.028	0.369	Not Supported
H7a	Government Trust → Disease Denial	-0.484	p<0.001	Not supported
H7b	Health Surveillance → Disease Denial	0.089	0.065	Not supported
H8a	Immunity trust → Intention to visit	0.101	**0.01**	**Supported**
H8b	Moderated effect of Immunity trust in Disease Denial	0.020	0.508	Not Supported
H9	Brand trust → Intention to visit	0.127	**p<0.001**	**Supported**

Table 6 – Hypotheses Testing Results

Source: Author's elaboration using SPPS outputs

5 Discussion

5.1 Theoretical Implications

While the COVID-19 pandemic has given the hospitality industry unprecedented challenges, it also presents great research opportunities for hospitality scholars. Hospitality literature is changing, and scholars should reset their research focus to develop solutions for the industry.

This research has some important theoretical implications. In this study, the total variance explained by the proposed factors was 52,6%. This R^2 value indicates that this model demonstrated a moderate explanatory power. Based on this result, it can be considered that the intention to visit a restaurant during the Coronavirus pandemic is predicted by consumers' perceived health risk, solidarity, immunity trust, and brand trust. Surprisingly, age does not affect the intention to visit a restaurant. The research findings also indicate the importance of perceived health risk in decreasing the intention to visit restaurants during COVID-19. In this sense, to increase customers' intentions to patronize restaurants, hospitality businesses are expected to revise their business operations and environment to ensure employees' and customers' health and safety (Gössling et al., 2020).

The role of solidarity has already been positively identified as affecting consumers' intention to visit restaurants during the COVID-19 pandemic in Brazil (Hakim et al., 2021). The findings of this study evidence that. Unfortunately, a remarkable number of employed and self-employed had to reduce their working hours, became unemployed, or went out of business, increasing the demand for monetary support. Due to the lockdown and stay-at-home orders, customers' searching for safer and low-risk approaches such as delivery to ameliorate the restaurants' industry is seen as an expression of solidarity (Zanetta et al., 2021).

Furthermore, the pandemic has evidenced immunity trust as a new unexploited factor positively affecting consumers' intention to visit restaurants. This variable is relevant, and its role in changing consumer behavior can be seen as the result of the generalized acceptance and confidence towards the vaccines and its ability to convey immunity against the virus, leading to a sense of security whilst visiting restaurants.

In addition, this research's model also highlights the influence of customers' trust in restaurants' brands in increasing consumers' intention to visit during the pandemic. In the context of restaurants, Bredahl (2001) believes that trust is an essential factor in buying behavior. It is acknowledged that trust in a restaurant's brand is directly linked to the consumer's judgment on food quality, more compliance with food safety protocols, and higher hygiene standards. Therefore, trust is an important link between consumers and providers and must be considered a critical component in this relationship (Elliott and Yannopoulou, 2007).

The results of this study add knowledge to the literature in hospitality, marketing, and tourism. Further investigation on COVID-19 is crucial because it leads to real-life challenges (Aristovnik, Ravšelj & Umek, 2020). Knowledge about a given business sector's anxieties and desires allows policymakers to adopt solutions, strengthening confidence in the economy and the future.

5.2 Managerial Implications

"Preventing a natural disaster is beyond the capability of humans" (Runyan, 2006; p.21). However, crises that manifest from such disasters are feasible to cope with (Runyan, 2006).

Coronavirus outbreak brought a level of crisis that, for many, was unprecedented. As COVID-19 escalated globally in 2020, mandated suspension of dine-in services was instilled to control virus transmission. Restaurants lost billions of dollars, millions experienced severe employment changes, and numerous small restaurants closed. For those remaining in business, converting to online food ordering was essential. Adopting new response capabilities quickly and accurately will replace long-term thinking and become the norm. In this sense, digitization will continue to assert itself more and more, and the way companies organize themselves to provide services will be progressively impacted by increasing agility levels.

In this regard, this study's findings contribute to the restaurant industry's current context, providing new approaches for service providers to cope with COVID-19 while attracting customers. Even though the hospitality industry is slowly recovering, the effects of the pandemic in how the hospitality businesses operate will remain for longer.

While under self-preventive practices, dining at restaurants becomes a lower priority. Therefore, to some extent, pandemic-related safety precautions are driven by consumer demand. One of the most common adjustments to sustain the restaurant business is delivery, take-out, or drive-through services (Gössling et al., 2020, Luo and Xu, 2021). Several are the reasons why the online food delivery service has become the most popular, but convenience is the most prominent (Cho et al., 2019). The growing search of the adjustments mentioned above is best explained by diners' concerns about food safety during the pandemic. From a customer's perspective, uncertainty over the safety of dining out during the pandemic can be mitigated by seeking out and sharing information online about restaurants' sanitation and hygiene protocols. Online review platforms are beneficial for this purpose as they provide unfiltered, real-time information (Kim et al., 2021, Schroeder et al., 2013). Therefore, more than ever, transparency is the key.

The crisis triggered by the pandemic can only be overcome with imagination and innovation. Competing in the global market, attracting talent, and ensuring the degree of innovation that fuels the

new economy requires companies from the connected world. Companies need resources with flexibility to learn today and write tomorrow.

5.3   Limitations and Future Research

This study has limitations, which also suggest avenues for future research. First, the sample used in this research is limited to customers located in Portugal. Therefore, it is advisable not to generalize the results to different realities. Considering this, future research could test this research model in a foreign country and another type of economy. This consideration is expected to discover further global dynamics with different restrictions under different geospatial characteristics.

Future research could use qualitative methods to add more depth to the present findings on consumers' perceptions and intentions. Up to the present, while there has been an increase in country-specific (single case) studies, there are no studies that adopted multi-case studies (multiple countries).

In addition, the study focused on the Millennials generation. However, to have more significant and wider contributions, more age groups were introduced to compare consumers' behaviors regarding the COVID-19 risk perception and their intention when visiting restaurants during a crisis. Unfortunately, the sample turned out to be biased due to the large collection of responses from a single age group, specifically from 18-25 (61,9%). A major disadvantage is related to the fact that it is not possible to extrapolate with confidence to the population the results and conclusions drawn from the sample. Therefore, further investigations should use a more precise sampling method, and if used a non-probabilistic procedure again, it is suggested by quotas.

Moreover, new determinants for intention to visit restaurants should be explored. The construct immunity trust should be included in future studies to validate and corroborate the results of this research.

These limitations, however, do not mean the findings of this study are unimportant. After all, given a current push to revive the economy despite uncertainty in how the pandemic will continue to unfold, it remains to be seen whether customers will have the confidence to begin visiting restaurants and restore a sense of normalcy when dining out. Under this tenuous economic environment, empirical studies investigating restaurant businesses' responses throughout the pandemic will be particularly valuable.

Furthermore, COVID-19 is an ongoing global pandemic, and its epidemiological scenario is different each month. This study's main focal point is on the restaurants' business restrictions. Thus, the time window of this study is considerably limited. Now, it is possible to see that after months of near-total lockdown, several countries begin phased reopening and many of them with few

restrictions. As a result, consumer perceptions and behavior may change dramatically with the pandemic's evolution or regression. Also, studies will be needed to assess the pandemic's social and psychological effects on consumer behavior. The different characteristics and information about COVID-19 are quite dynamic, especially because consumer perceptions have changed dramatically since effective vaccines for COVID-19 are authorized. Longitudinal studies can better capture consumer perception, which is also dynamic and influenced by situational issues.

Another future research path could include neuroscience to obtain a new understanding of consumers' behavior and cognitive functions when visiting restaurants and its impact on their brains.

These limitations mentioned above prove how important this topic is becoming, and more studies are needed to explain the intention to visit restaurants, especially during a pandemic.

6   References

Aaker, D. A., Kummar, V., George, S. D. (2004). Marketing Research. 8th Edition. New York: Wiley

Abir T, Kalimullah NA, Osuagwu UL, Yazdani DMN, Mamun AA, Husain T, Basak P, Permarupan PY, Agho KE. (2020). Factors Associated with the Perception of Risk and Knowledge of Contracting the SARS-Cov-2 among Adults in Bangladesh: Analysis of Online Surveys. *International Journal of Environmental Research and Public Health*, 17(14), 5252. https://doi.org/10.3390/ijerph17145252

Ali Chisty, M., et al. (2021). Risk perception and information-seeking behavior during emergency: An exploratory study on COVID-19 pandemic in Bangladesh. *International Journal of Disaster Risk Reduction*, 65, 102580. https://doi.org/10.1016/j.ijdrr.2021.102580

Amoroso, S., Pattuglia, S., Khan, I. (2021). Do Millennials share similar perceptions of brand experience? A clusterization based on brand experience and other brand-related constructs: the case of Netflix. Journal of Marketing Analytics, 9, 33–43. https://doi.org/10.1057/s41270-021-00103-0

Ansari, A., Mela, C.F. (2003). E-customization. *Journal of Marketing Research*, 40(2), 131-145. https://doi.org/10.1509/jmkr.40.2.131.19224

Aristovnik, A., Ravšelj, D., Umek, L. (2020). A Bibliometric Analysis of COVID-19 across Science and Social Science Research Landscape. *Sustainability*, 12, 9132. https://doi.org/10.3390/su12219132

Aydin, S., Ozer, G. (2005). The Analysis of Antecedents of Customer Loyalty in the Turkish Mobile Telecommunication Market. *European Journal of Marketing*, 39, 910–925. https://doi.org/10.1108/03090560510601833

Barbalet, J. (1996). Social Emotions: Confidence, Trust, and Loyalty. *International Journal of Sociology and Social Policy*, 16, 75–96. https://doi.org/10.1108/eb013270

Basch, M. F. (1983). The Perception of Reality and the Disavowal of Meaning. *Annual of Psychoanalysis*, 11, 125–153.

Baumgarth, N., Nikolich-Zugich, J., Lee, F.E., and Bhattacharya, D. (2020). Antibody Responses to SARS-CoV-2: Let's Stick to Known Knowns. *Journal of Immunology*, 205(9), 2342-2350. https://doi.org/10.4049/jimmunol.2000839

Bitner, M.J., Brown, S.W., Meuter, M.L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, 28(1), 139-149. https://doi.org/10.1177/0092070300281013

Bolek, S. (2020). Consumer knowledge, atitudes, and judgments about food safety: A consumer analysis. *Trends in Food Science & Technology*, 102, 242–248. https://doi.org/10.1016/j.tifs.2020.03.009

Bornstein M. H., Jager J., Putnick D. L. (2013). Sampling in developmental science: Situations, shortcomings, solutions, and standards. *Developmental Review*, 33, 357-370. https://doi.org/10.1016/j.dr.2013.08.003

Bredahl, L. (2001). Determinants of consumer attitudes and purchase intentions with regard to genetically modified foods: results of a cross-national survey. *Journal of Consumer Policy*, 24(1), 23-61. http://dx.doi.org/10.1023%2FA%3A1010950406128

Breier, M., Kallmuenzer, A., Clauss, T., Gast, J., Kraus, S., Tiberius, V. (2021). The role of business model innovation in the hospitality industry during the COVID-19 crisis. *International Journal of Hospitality Management*, 92, 102723. https://doi.org/10.1016/j.ijhm.2020.102723

Bro, R., Smilde, A.K. (2014). Principal component analysis. *Analytical Methods*, 6(9), 2812–2831. https://doi.org/10.1039/c3ay41907j

Callow, K.A., Parry, H.F., Sergeant, M., and Tyrrell, D.A. (1990). The time course of the immune response to experimental coronavirus infection of man. *Epidemiology & Infection*, 105, 435–446. https://dx.doi.org/10.1017%2Fs0950268800048019

Chaudhuri, A., Holbrook, M.B. (2001). The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty. *Journal of Marketing*, 65, 81–93. https://doi.org/10.1509%2Fjmkg.65.2.81.18255

Cho, M., Bonn, M. A., Li, J. (2019). Differences in perceptions about food delivery apps between single-person and multi-person households. *International Journal of Hospitality Management*, 77, 108–116. https://doi.org/10.1016/j.ijhm.2018.06.019

Dan et al. (2021). Immunological memory to SARS-CoV-2 assessed for up to 8 months after infection. *Science*, 371, 6529. https://doi.org/10.1126/science.abf4063

Davies, B., Savulescu, J. (2019). Solidarity and Responsibility in Health Care. *Public Health Ethics*, 12(2), 133-144. https://doi.org/10.1093/phe/phz008

De Andrade, M. L., Rodrigues, R. R., Antongiovanni, N., da Cunha, D. T. (2019). Knowledge and risk perceptions of foodborne disease by consumers and food handlers at restaurants with different food safety profiles. *Food Research International*, 121(7), 845–853. https://doi.org/10.1016/j.foodres.2019.01.006

de Jonge, J., Frewer, L., Van Trijp, H., Jan Renes, R., de Wit, W., Timmers, J. (2004). Monitoring consumer confidence in food safety: An exploratory study. *British Food Journal, 106*, 837–849. https://doi.org/10.1108/00070700410561423

Dehdashti, Z., Kenari, M.J., Bakhshizadeh, A. (2012). The Impact of Social Identity of Brand on Brand Loyalty Development. *Management Science Letters*, 2, 1425–1434. https://doi.org/10.5267/j.msl.2012.03.020

Delgado-Ballester, E., Munuera-Alemán, J. (2005). Does brand trust matter to Brand equity? *Journal of Product & Brand Management*, 14(3), 187–196. https://doi.org/10.1108/10610420510601058

Delgado-Ballester, E., Munuera-Alemán, J.L., Yague-Guillen, M.J. (2003). Development and validation of a brand trust scale. *International Journal of Market Research*, 45(1), 35-54. https://doi.org/10.1177/147078530304500103

Denial. (2021). In *Oxford Dictionary*. https://www.oxfordlearnersdictionaries.com/27nglistion/27nglish/denial

Elliott, R., Yannopoulou, N. (2007). The nature of trust in brands: a psychosocial model. *European Journal of Marketing*, 41(9-10), 988-998. https://doi.org/10.1108/03090560710773309

Ferrer, R.A., Klein, W.M.P., Avishai, A., Jones, K., Villegas, M., Sheeran, P. (2018). When does risk perception predict protection motivation for health threats? A person-by-situation analysis. *PloS One*, 13(3), e0191994. https://doi.org/10.1371/journal.pone.0191994

Field, A. (2005). Discovering Statistics Using SPSS for Windows, London, Sage Publications.

Fischer, A.R.H., Frewer, L.J. (2009). Consumer familiarity with foods and the perception of risks and benefits. Food Quality and Preference, 20(8),576-585. https://doi.org/10.1016/j.foodqual.2009.06.008

Foroudi, S.P., Tabaghdehi, A.H., Marvi, R. (2021). The gloom of the COVID-19 shock in the hospitality industry: A study of consumer risk perception and adaptive belief in the dark cloud of a pandemic. *International Journal of Hospitality Management*, 92, 102717. https://doi.org/10.1016/j.ijhm.2020.102717

Goldfinch, S, Taplin, R, Gauld, R. (2021). Trust in Government increased during the Covid-19 pandemic in Australia and New Zealand. *Australian Journal Public Administration*, 80, 3– 11. https://doi.org/10.1111/1467-8500.12459

Gössling, S., Scott, D., Hall, C. M. (2020). Pandemics, tourism, and global change: a rapid assessment of COVID-19. *Journal of Sustainable Tourism,* 1–20. https://doi.org/10.1080/09669582.2020.1758708

Greaney, A.J., Starr, T.N. et al. (2020). Complete Mapping of Mutations to the SARS-CoV-2 Spike Receptor-Binding Domain that Escape Antibody Recognition. Cell Host & Microbe, 29(1), 44-57.e9. https://doi.org/10.1016/j.chom.2020.11.007

Gursoy, D., Chi, C.G. (2020). Effects of COVID-19 pandemic on hospitality industry: Review of the current situations and a research agenda. *Journal of Hospitality Marketing & Management*, 29 (5) (2020), pp. 527-529. https://doi.org/10.1080/19368623.2020.1788231

Gustavsen, A., Røiseland, A., Pierre, J. (2014). Procedure or performance? Assessing citizen's attitudes toward legitimacy in Swedish and Norwegian local Government. *Urban Research & Practice*, 7(2), 200–212. https://doi.org/10.1080/17535069.2014.910924

Hakim, M.P., D'Avoglio Zanetta, L., da Cunha, D.T. (2021). Should I stay, or should I go? Consumers' perceived risk and intention to visit restaurants during the COVID-19 pandemic in Brazil. *Food Research International*, 141, 110152. https://doi.org/10.1016/j.foodres.2021.110152

Hakim, M.P., Zanetta, L.D.A., de Oliveira, J. M., da Cunha, D.T. (2020). The mandatory labeling of genetically modified foods in Brazil: Consumer's knowledge, trust, and risk perception. *Food Research International, 132*, Article 109053. https:// doi.org/10.1016/j.foodres.2020.109053

Han, H., Hsu, L., Lee, J. (2009). Empirical investigation of the roles of attitudes toward green behaviors, overall image, gender, and age in hotel customers' eco-friendly decision-making process. *International Journal of Hospitality Management*, 28(4), 519-528. https://doi.org/10.1016/j.ijhm.2009.02.004

Heidi, J., Clarke, R.M., Jarrett, C., Eckersberger, E., Levine, Z., Schulz, W.S., Paterson, P. (2018). Measuring trust in vaccination: A systematic review. *Human Vaccines & Immunotherapeutics*, 14:7, 1599-1609. https//doi.org/10.1080/21645515.2018.1459252

Hiscock, J. (2001). Most trusted brands. *Marketing*, pp. 32-33. https://doi.org/10.1111/1467-8500.12459

Ibarrondo, F.J., Fulcher, J.A., Goodman-Meza, D., Elliott, J., Hofmann, C., Hausner, M.A., Ferbas, K.G., Tobin, N.H., Aldrovandi, G.M., and Yang, O.O. (2020). Rapid Decay of Anti-SARS-CoV-2 Antibodies in Persons with Mild Covid-19. *The New England Journal of Medicine*, 383, 1085–1087. https://doi.org/10.1056/nejmc2025179

Jolliffe I. T., Cadima, J. (2016). Principal component analysis: a review and recent developments. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences,* 374, 2065. https://doi.org/10.1098/rsta.2015.0202

Kim, J., Kim, J., Wang, Y. (2021). Uncertainty risks and strategic reaction of restaurant firms amid COVID-19: Evidence from China. *International Journal of Hospitality Management, 92*, Article 102752. https://doi.org/10.1016/j.ijhm.2020.102752

Kim, J., Lee, J. C. (2020). Effect of COVID-19 on Preference for Private Dining Facilities in Restaurants. *Journal of Hospitality and Tourism Management*, 45, 67-70. https://doi.org/10.1016/j.jhtm.2020.07.008

Koch, M., Park, S. (2021). Do government responses impact the relationship between age, gender, and psychological distress during the COVID-19 pandemic? A comparison across 27 European countries, *Social Science & Medicine*, 114583, 0277-9536. https://doi.org/10.1016/j.socscimed.2021.114583

Lacey, S., Bruwer, J., Li, E. (2009). The role of perceived risk in wine purchase decisions in restaurants. *International Journal of Wine Business Research*, 21, 99–117. https://doi.org/10.1108/17511060910967962

Li, X., Wang, W., Zhao, X., Zai, J., Zhao, Q., Li, Y., Chaillon, A. (2020). Transmission dynamics and evolutionary history of 2019-nCoV. *Journal of Medicine Virology*, 92(5), 501-511. https://doi.org/10.1002/jmv.25701

Lock, S. (2020). Year-over-year daily change in seated restaurant diners due to the coronavirus (COVID-19) pandemic worldwide from February 24 to October 12, 2020. https://www.statista.com/statistics/1103928/coronavirus-restaurant- visitation-impact/

Lock, S. (2021). Daily year-on-year impact of COVID-19 on global restaurant dining 2020-2021. https://www.statista.com/statistics/1103928/coronavirus-restaurant-visitation-impact/

Luo, Y., Xu, X. (2021). Comparative study of deep learning models for analyzing online restaurant reviews in the era of the COVID-19 pandemic. *International Journal of Hospitality Management*, 94, 102849. https://doi.org/10.1016/j.ijhm.2020.102849

Madiba, G., Roberts-Lombard, M. (2011). Measuring the Attitude and Intention to Purchase of Different Cohorts towards a Fast Food Retailer. *African Journal of Business Management* 5(9), 3649- 3665. https://doi.org/10.5897/AJBM10.667

Martín-Sánchez, F.J., Del Toro, E., Cardassay, E., Valls Carbó, A., Cuesta, F., Vigara, M., Gil P., López Picado, A.L., Martínez Valero, C., Miranda, J.D., Lopez-Ayala, P., et al. (2020). Clinical presentation and outcome across age categories among patients with COVID-19 admitted to a Spanish Emergency Department. *European Geriatric Medicine*, 11, 829–841. https://doi.org/10.1007/s41999-020-00359-2

Min, J., Kim, J., Yang, K. (2021). How generations differ in coping with a pandemic: The case of restaurant industry. *Journal of Hospitality and Tourism Management*, 48, 280-288. https://doi.org/10.1016/j.jhtm.2021.06.017

Mishra, C., Rath, N. (2020). Social solidarity during a pandemic: Through and beyond Durkheimian Lens. *Social Sciences & Humanities Open*, 2(1), 100079. https://doi.org/10.1016/j.ssaho.2020.100079

Mitchell, V.W., McGoldrick, P. (1996). Consumers' risk-reduction strategies: A review and synthesis. *International Review of Retail, Distribution and Consumer Research*, 6(1), 1–33. https://doi.org/10.1080/09593969600000001

Moore, M. (2012). Interactive media usage among millennial consumers. *Journal of Consumer Marketing*, 29(6), 436–444. https://doi.org/10.1108/07363761211259241

Moorman, C., Deshpande, R., Zaltman, G. (1993). Factors Affecting Trust in Market Research Relationships. *Journal of Marketing*, 57, 81–101. https://doi.org/10.2307/1252059

Moreno, F., Lafuente, J.G., Carreón, F.Á., & Moreno, S.M. (2017). The Characterization of the Millennials and Their Buying Behavior. *International Journal of Marketing Studies*, 9, 135-144. https://doi.org/10.5539/IJMS.V9N5P135

Ngo, H.M., Liu, R., Moritaka, M., Fukuda, S. (2020). Urban consumer trust in safe vegetables in Vietnam: The role of brand trust and the impact of consumer worry about vegetable safety. *Food Control, 108*, Article 106856. https://doi.org/10.1016/j.foodcont.2019.106856

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M., Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery*, 78, 185-193. https://doi.org/10.1016/j.ijsu.2020.04.018

Nivette, A., Ribeaud, D., Murray, A., Steinhoff, A. et al. (2021). Non-compliance with COVID-19-related public health measures among young adults in Switzerland: Insights from a longitudinal cohort study. *Social Science & Medicine*, 268, 113370. https://doi.org/10.1016/j. socscimed.2020.113370

Norum, P.S. (2003). Examination of generational differences in household apparel expenditures. *Family and Consumer Sciences Research Journal*, 32(1), 52–75. https://doi.org/10.1177/1077727X03255901

Nowak, L., Thach, L., Olsen, J. E. (2006). Wowing the millennials: creating brand equity in the wine industry. *Journal of Product and Brand Management*, 15(5), 316–323. https://doi.org/10.1108/10610420610685712

Omari, R., Ruivenkamp, G. T. P., & Tetteh, E. K. (2017). Consumers' trust in government institutions and their perception and concern about safety and healthiness of fast food. *Journal of Trust Research,* 7(2), 170–186. https://doi.org/10.1080/21515581.2017.1289099

Osterholm, M. T. (2005). Preparing for the next pandemic. *New England Journal of Medicine*, 352(18), 1839–1842. https://doi.org/10.1056/NEJMp058068

Park, C. L., Russell, B. S., Fendrich, M., Finkelstein-Fox, L., Hutchison, M., & Becker, J. (2020). Americans' COVID-19 Stress, Coping, and Adherence to CDC Guidelines. *Journal of General Internal Medicine*, 35(8), 2296–2303. https://doi.org/10.1007/s11606-020-05898-9

Paskov, M., Dewilde, C. (2012). Income inequality and solidarity in Europe. *Research in Social Stratification and Mobility*, 30(4), 415-432. https://doi.org/10.1016/j.rssm.2012.06.002

Qureshi, A.I., Suri, M.F.K., Chu, H., Suri, H.K., Suri, A.K. (2021). Early mandated social distancing is a strong predictor of reduction in peak daily new COVID-19 cases. *Public Health*, 190, 160-167. https://doi.org/10.1016/j.puhe.2020.10.015

Reichlin, M. (2011). The role of solidarity in social responsibility for health. *Medicine, Healthcare & Philosophy*, 14(4), 365-370. https://doi.org/10.1007/s11019-011-9320-5

Ripperger, T.J., Uhrlaub, J.L., Watanabe, M., Wong, R., Castaneda, Y., Piz- zato, H.A., Thompson, M.R., Bradshaw, C., Weinkauf, C.C., Bime, C., et al. (2020). Orthogonal SARS-CoV-2 Serological Assays Enable Surveillance of Low-Prevalence Communities and Reveal Durable Humoral Immunity. *Immunity*, 53(5), 925-933. https://doi.org/10.1016/j.immuni.2020.10.004

Rodda, L.B. et al. (2021). Functional SARS-CoV-2-Specific Immune Memory Persists after Mild COVID-19. *Cell*, 184(1):169-183. https://doi.org/10.1016/j.cell.2020.11.029

Rudolph, T.J., Evans, J. (2005). Political trust, ideology, and public support for government spending. *American Journal of Political Science*, 49(3), 660-671. https://doi.org/10.1111/j.1540-5907.2005.00148.x

Runyan, R.C. (2006). Small Business in the Face of Crisis: Identifying Barriers to Recovery from a Natural Disaster. *Journal Contingencies Crisis Management*, 14, 12–26. https://doi.org/10.1111/j.1468-5973.2006.00477.x

Sago, B. (2010). The Influence of Social Media Message Sources on Millennial Generation Consumers. *International Journal of Integrated Marketing Communications*, 2, 7-18. https://doi.org/10.1108/YC- 07-2016-00622

Schneider, S.H., Eger, J., Bruder, M., Faust, J., Wieler, L.H. (2021). Does the COVID-19 pandemic threaten global solidarity? Evidence from Germany. *World Development*, 140, 105356. https://doi.org/10.1016/j.worlddev.2020.105356

Schroeder, A., Pennington-Gray, L., Donohoe, H., Kiousis, S. (2013). Using social media in times of crisis *Journal of Travel & Tourism Marketing*, 30(1–2), 126-143. https://doi.org/10.1080/10548408.2013.751271

Siegrist, M., Cvetkovich, G., Roth, C. (2000). Salient value similarity, social trust, and risk/benefit perception. *Risk Analysis*, 20(3), 353-62. https://doi.org/10.1111/0272-4332.203034

Siegrist, M., Luchsinger, L. and Bearth, A. (2021). The Impact of Trust and Risk Perception on the Acceptance of Measures to Reduce COVID-19 Cases. *Risk Analysis*, 0(0), 1-14. https://doi.org/10.1111/risa.13675

Soares, R.R., Zhang, T.T., Proença, J.F., Kandampully, J. (2017). Why are Generation Y consumers the most likely to complain and repurchase? *Journal of Service Management*, 28(3), 520-540. https://doi.org/10.1108/JOSM-08-2015-0256

Song, H. J., Yeon, J., Lee, S. (2021). Impact of the COVID-19 pandemic: Evidence from the U.S. restaurant industry. *International Journal of Hospitality Management, 92*, Article 102702. https://doi.org/10.1016/j.ijhm.2020.102702

Taha, S. A., Matheson, K., Anisman, H. (2014). H1N1 Was Not All That Scary: Uncertainty and stressor appraisals predict anxiety related to a coming viral threat. *Stress and Health*, 30(2), 149–157. https://doi.org/10.1002/smi.2505

Tiozzo, B., Mari, S., Ruzza, M., Crovato, S., Ravarotto, L. (2017). Consumers' perceptions of food risks: A snapshot of the Italian Triveneto area. *Appetite*, 111, 105-115. https://doi.org/10.1016/j.appet.2016.12.028

Torales, J., O'Higgins, M., Castaldelli-Maia, J.M., Ventriglio, A. (2020). The outbreak of COVID-19 coronavirus and its impact on global mental health. *International Journal of Social Psychiatry*, 66(4), 317-320. https://doi.org/10.1177%2F0020764020915212

Velavan, T. P., Meyer, C. G. (2020). The COVID-19 epidemic. *Tropical Medicine & International Health*, 25(3), 278–280. https://doi.org/10.1111/tmi.13383

Webster, R. K., Brooks, S. K., Smith, L. E., Woodland, L., Wessely, S., & Rubin, G. J. (2020). How to improve adherence with quarantine: Rapid review of the evidence. *Public Health, 182*, 163–169. https://doi.org/10.1016/j.puhe.2020.03.007

Williams, B., Brown, T., Onsman, A. (2010). Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Paramedicine*, 8, 3. http://doi.org/10.33151/ajp.8.3.93

Wong, F., Liu, T., Leung, D., Zhang, A. Y., Au, W., Kwok, W. W., Shum, A., Wong, G., Lum, T. Y. (2021). Consuming Information Related to COVID-19 on Social Media Among Older Adults and Its Association With Anxiety, Social Trust in Information, and COVID-Safe Behaviors: Cross-sectional Telephone Survey. *Journal of Medical Internet Research*, 23(2), e26570. https://doi.org/10.2196/26570

World Health Organization (WHO), 2021. COVID-19 Situation Update Worldwide. https://covid19.who.int/?gclid=Cj0KCQjw3Nv3BRC8ARIsAPh8hgIONXFjgsbXg5E0QTdt1g24rDl2T8S23xc9B-x1rnwVtkHTYdHQIRQaAhGG%20EALw_wcB

Wu, Z., McGoogan, J.M. (2020). Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention. *JAMA*, 323(13), 1239–1242. https://doi.org/10.1001/jama.2020.2648

Yang, Y., Liu, H., Chen, X. (2020). COVID-19 and restaurant demand: early effects of the Pandemic and stay-at-home orders. *International Journal of Contemporary Hospitality Management*, 13(12), 3809-3834. https://doi.org/10.1108/IJCHM-06-2020-0504

Zanetta, L.D'A., Hakim, M.P., Gastaldi, G.B., Seabra, L.M'A.J., Rolim, P.M., Nascimento, L.G.P., Medeiros, C.O., da Cunha, D.T. (2021). The use of food delivery apps during the COVID-19 pandemic in Brazil: The role of solidarity, perceived risk, and regional aspects. *Food Research International*, 149, 110671. https://doi.org/10.1016/j.foodres.2021.110671

Zeren, D., Kara, A. (2020). Effects of Brand Heritage on Intentions to Buy of Airline Services: The Mediating Roles of Brand Trust and Brand Loyalty. *Sustainability*, 13(1), 303. https://doi.org/10.3390/su13010303

7   Appendices

7.1   Appendix A: English Applied Survey

PART 1 – CONSENT

Dear participants,

This survey is integrated into ISCTE Business School Master Program in Management, whose main purpose is to examine the consumers' perceived risk and intention to visit restaurants in Portugal during the Coronavirus outbreak.
Please be as authentic as possible when answering the questions by expressing your unique preferences. There are **no right or wrong answers,** and your opinion is of great relevance. It is important to mention that your **responses will be anonymous and confidential**, and the data collected will be strictly used for the purpose of my thesis.

The survey will **not take more than 5 minutes to complete**. For further clarifications or observations, please contact me through my e-mail address: isabel.oitaven@gmail.com.

By clicking "I agree" to participate in this research, I declare that I was informed that my participation in this study is voluntary, that I can leave this survey at any time without penalty, and all data is confidential. I understood this study does not offer serious risks.

Multiple Choice

I agree to participate in this survey
I do not agree to participate in this survey

PART 2 – GENERAL INFORMATION

To answer this section, please consider your situation <u>before and during the COVID-19 pandemic</u>.

Multiple Choice

1.   How often did you use to visit restaurants before the Coronavirus outbreak?
Once a month
Twice a month
Three times per month
Between four to six times per month
Between seven and ten times per month
More than ten times per month
Never

Multiple Choice

2. Are you planning on visiting a restaurant within the next three months?
Definitely not
Probably not
Might or might not
Probably yes
Definitely yes

Multiple Choice

3. How often would you visit restaurants within the next three months?
Once a month
Twice a month
Three times per month
Between four to six times per month
Between seven and ten times per month
More than ten times per month

PART 3 – THE DOMAIN AND ITEMS OF THE CONSTRUCT IN THE EXTENT LITERATURE

To answer this section, please consider your situation <u>during the COVID-19 pandemic</u>: The following statements relate <u>to your perception of risk</u>.

Please read each statement carefully and indicate how strongly you disagree or agree with each statement:

4. Perception of Coronavirus Pandemic	1	2	3	4	5	6	7
Coronavirus is a very frightening disease.							
Compared to SARS, avian flu, or Influenza, Coronavirus is more dangerous.							
I am afraid of Coronavirus.							

5. Disease Denial	1	2	3	4	5	6	7
It would be better not to have any kind of restriction, even if Coronavirus-related deaths continue to happen.							
If my friends and family do not obey the Coronavirus confinement, I also do not need to be isolated.							
It is not worth it trying to avoid the Coronavirus now, If I can catch it later.							
I am not afraid of contracting the Coronavirus disease; It is simply the flu.							

To answer this section, please consider your situation during the COVID-19 pandemic: The following statements relate to different types of trust.

Please read each statement carefully and indicate how strongly you disagree or agree with each statement:

6. Government Trust	1	2	3	4	5	6	7
I trust the Government to strengthen enforcement actions to comply with the rules, either on public roads or commercial and restaurants establishments.							
I trust the Government to impose safety measures to contain the Coronavirus outbreak.							
I trust that the Government does not control and manipulate information and news about the Coronavirus outbreak.							

7. Health Surveillance Trust	1	2	3	4	5	6	7
I trust the Health Surveillance authorities to be competent enough to guarantee health-related safety in restaurants.							
I trust the Health Surveillance authorities to audit restaurants randomly, without favouring anyone.							
I trust the Health Surveillance authorities to fine only establishments that deserve it.							
I trust the Health Surveillance authorities to regulate and enforce the legislation and rules for reopening restaurants.							

8. Immunity Trust	1	2	3	4	5	6	7
I trust that immunity obtained from Coronavirus infection will give me antibodies for at least three months.							
I trust that immunity from the Coronavirus vaccine will give me antibodies for at least one year.							
I trust that immunity will give me fewer chances of re-infection.							
I feel safer to go to restaurants while having immunity.							
I would intend to visit restaurants while having immunity.							

To answer this section, please consider your situation during the COVID-19 pandemic: The following statements relate <u>to your intention to visit restaurants</u>.

Please read each statement carefully and indicate how strongly you disagree or agree with each statement:

9. Solidarity	1	2	3	4	5	6	7
During the Coronavirus outbreak, I would go to restaurants to prevent them from closing permanently.							
During the Coronavirus outbreak, I would go to restaurants to prevent sector employees from becoming unemployed.							
During the Coronavirus outbreak, I would go to restaurants to channel money into the sector.							

10. Brand Trust	1	2	3	4	5	6	7
I believe the restaurants I know/frequent are reliable in terms of ensuring health safety.							
I believe it is safer to go to restaurants that I know/frequent.							
I always choose to go to restaurants that I know/frequent.							

11. Perceived Health Risk	1	2	3	4	5	6	7
Due to the Coronavirus outbreak, I worry that going to restaurants is harmful.							
Due to the Coronavirus outbreak, people around me seem to refrain from visiting restaurants.							
Due to the Coronavirus outbreak, I worry about my health after going to a restaurant.							
Due to the Coronavirus outbreak, I believe it is very dangerous to go to a restaurant.							
Due to the Coronavirus outbreak, I believe it is unsafe to reopen restaurants.							

12. Intention to Visit	1	2	3	4	5	6	7
If restaurants open in my city, I intend to visit them.							
If restaurants open in my city, I am interested in visiting them in the coming days.							
Despite the Coronavirus outbreak, I am willing to go to restaurants.							
Despite having *home-delivery* and *take-away* options, I intend to go to restaurants.							

PART 4 – DEMOGRAPHIC PROFILE

Multiple Choice

13. Gender
Male
Female
Prefer not to say

Multiple Choice

14. Age
18-25
26-35
36-45
46-55
> 55

Multiple Choice

15. Level of Education
Primary or Elementary School
High School
Bachelor
Post-Graduation
Master
PhD

Multiple Choice

16. Occupation
Student
Student-Employee
Employee
Self-Employed
Unemployed

| Housewife |
| Retired |

Multiple Choice

| 17. Residence District |
| Aveiro |
| Beja |
| Braga |
| Bragança |
| Castelo Branco |
| Coimbra |
| Évora |
| Faro |
| Guarda |
| Leiria |
| Lisboa |
| Porto |
| Portalegre |
| Santarém |
| Setúbal |
| Viana do Castelo |
| Vila Real |
| Viseu |
| Madeira |
| Açores |

PART 5 – SUBMISSION

Thank you for your time. Your response has been noted.

7.2   Appendix B: Internal Consistency of Constructs in the Pre-test

Construct	Cronbach's Alpha
Perception of Coronavirus Pandemic	0,721
Disease Denial	0,538
Government Trust	0,825
Health Surveillance Trust	0,896
Immunity Trust	0,705
Solidarity	0,955
Brand Trust	0,696
Perceived Health Risk	0,733
Intention to Visit	0,864

Table 7 – Internal Consistency of Constructs in the Pre-test (N=54)

Source: Author's elaboration using SPPS outputs

7.3   Appendix C: Principal Components Communalities and Loadings

Perception of Coronavirus Pandemic	Communality	Loading
Coronavirus is a very frightening disease.	,787	,887
Compared to SARS, avian flu, or Influenza, Coronavirus is more dangerous.	,518	,719
I am afraid of Coronavirus.	,739	,859

Table 8 – Communality and Loading of each item of Perception of Coronavirus Pandemic

Source: Author's elaboration using SPPS outputs

Disease Denial	Communality	Loading
It would be better not to have any kind of restriction, even if Coronavirus-related deaths continue to happen.	,606	,778
If my friends and family do not obey the Coronavirus confinement, I also do not need to be isolated.	,608	,780
It is not worth it trying to avoid the Coronavirus now, If I can catch it later.	,656	,810
I am not afraid of contracting the Coronavirus disease; It is simply the flu.	,645	,803

Table 9 – Communality and Loading of each item of Disease Denial

Source: Author's elaboration using SPPS outputs

Government Trust	Communality	Loading
I trust the Government to strengthen enforcement actions to comply with the rules, either on public roads or commercial and restaurants establishments.	,807	,898
I trust the Government to impose safety measures to contain the Coronavirus outbreak.	,843	,918
I trust that the Government does not control and manipulate information and news about the Coronavirus outbreak.	,493	,704

Table 10 – Communality and Loading of each item of Government Trust

Source: Author's elaboration using SPPS outputs

Health Surveillance Trust	Communality	Loading
I trust the Health Surveillance authorities to be competent enough to guarantee health-related safety in restaurants.	,715	,846
I trust the Health Surveillance authorities to audit restaurants randomly, without favouring anyone.	,814	,902
I trust the Health Surveillance authorities to fine only establishments that deserve it.	,733	,856
I trust the Health Surveillance authorities to regulate and enforce the legislation and rules for reopening restaurants.	,828	,910

Table 11 – Communality and Loading of each item of Health Surveillance Trust

Source: Author's elaboration using SPPS outputs

Immunity Trust	Communality	Loading
I trust that immunity from the Coronavirus vaccine will give me antibodies for at least one year.	,608	,779
I trust that immunity will give me fewer chances of re-infection.	,618	,786
I feel safer to go to restaurants while having immunity.	,595	,772

Table 12 – Communality and Loading of each item of Immunity Trust

Source: Author's elaboration using SPPS outputs

Solidarity	Communality	Loading
During the Coronavirus outbreak, I would go to restaurants to prevent them from closing permanently.	,924	,961
During the Coronavirus outbreak, I would go to restaurants to prevent sector employees from becoming unemployed.	,961	,980
During the Coronavirus outbreak, I would go to restaurants to channel money into the sector.	.921	,959

Table 13 – Communality and Loading of each item of Solidarity

Source: Author's elaboration using SPPS outputs

Brand Trust	Communality	Loading
I believe the restaurants I know/frequent are reliable in terms of ensuring health safety.	,444	,666
I believe it is safer to go to restaurants that I know/frequent.	,783	,885
I always choose to go to restaurants that I know/frequent.	,585	,771

Table 14 – Communality and Loading of each item of Brand Trust

Source: Author's elaboration using SPPS outputs

Perceived Health Risk	Communality	Loading
Due to the Coronavirus outbreak, I worry that going to restaurants is harmful.	,679	,824
Due to the Coronavirus outbreak, I worry about my health after going to a restaurant.	,568	,796
Due to the Coronavirus outbreak, I believe it is very dangerous to go to a restaurant.	,806	,898
Due to the Coronavirus outbreak, I believe it is unsafe to reopen restaurants.	,633	,754

Table 15 – Communality and Loading of each item of Perceived Health Risk

Source: Author's elaboration using SPPS outputs

Intention to visit	Communality	Loading
If restaurants open in my city, I intend to visit them.	,832	,929
If restaurants open in my city, I am interested in visiting them in the coming days.	,808	,899
Despite the Coronavirus outbreak, I am willing to go to restaurants.	,882	,939
Despite having *home-delivery* and *take-away* options, I intend to go to restaurants.	,849	,921

Table 16 – Communality and Loading of each item of Intention to visit

Source: Author's elaboration using SPPS outputs

7.4 Appendix D: Correlations between the variables under study

	Intention to visit	Disease Denial	Government Trust	Health Surveillance Trust	Immunity Trust	Solidarity	Brand Trust	Perceived Health Risk	Perception of Coronavirus Pandemic	Age
Intention to Visit	1,000									
Disease Denial	,174	1,000								
Government Trust	-,041	-,432	1,000							
Health Surveillance Trust	,102	-,193	,584	1,000						
Immunity Trust	,143	-,113	,139	,181	1,000					
Solidarity	,494	,217	-,093	,085	,088	1,000				
Brand Trust	,189	-,081	,064	,134	,104	,194	1,000			
Perceived Health Risk	-,658	-,331	,160	-,022	-,003	-,411	,008	1,000		
Perception of Coronavirus Pandemic	-,174	-,488	,248	,092	,092	-,189	,151	,401	1,000	
Age	,146	,080	-,069	-,040	,068	,265	-,029	-,154	-,266	1,000

Table 17 – Correlations between the variables under study

Source: Author's elaboration using SPPS outputs

7.5   Appendix E: Impact of Government Trust and Health Surveillance Trust on Disease Denial

Model Summary[b]					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	,438[a]	,192	,189	,90079408	1,938
a. Dependent Variable: DISEASE DENIAL					
b. Predictors: (Constant), GOVERNMENT TRUST, HEALTH SURVEILLANCE TRUST					

Table 18 – Disease Denial Model Summary

Source: Author's elaboration using SPPS outputs

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	101,376	2	50,688	62,468	,000[b]
	Residual	427,624	527	,811		
	Total	529,000	529			
a. Dependent Variable: DISEASE DENIAL						
b. Predictors: (Constant), GOVERNMENT TRUST, HEALTH SURVEILLANCE TRUST						

Table 19 – Testing the Global Validity of the Disease Denial Model

Source: Author's elaboration using SPPS outputs

Coefficients[a]								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		$\widehat{\beta}$	**Std. Error**	**Beta**			**TOL**	**VIF**
1	(Constant)	1,326E-16	,039		,000	1,000		
	HEALTH SURVEILLANCE TRUST	,089	,048	,089	1,852	,065	,659	1,517
	GOVERNMENT TRUST	-,484	,048	-,484	-10,030	,000	,659	1,517
a. Dependent Variable: DISEASE DENIAL								

Table 20 – Disease Denial Model Coefficients and Testing

Source: Author's elaboration using SPPS outputs

7.6 Appendix F: Impact of Perceived Health Risk, Solidarity, Brand Trust, Immunity Trust and Perception of Coronavirus Pandemic on Intention to visit

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
2	,728e	,530	,526	,68863820	1,982
a. Dependent Variable: INTENTION TO VISIT					
b. Predictors: (Constant), PERCEIVED HEALTH RISK, SOLIDARITY, BRAND TRUST, IMMUNITY TRUST, PERCEPTION OF CORONAVIRUS PANDEMIC					

Table 21 – Intention to visit Model Summary

Source: Author's elaboration using SPPS outputs

ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	280,507	5	56,101	118,302	,000f
	Residual	248,493	524	,474		
	Total	529,000	529			
a. Dependent Variable: INTENTION TO VISIT						
b. Predictors: (Constant), PERCEIVED HEALTH RISK, SOLIDARITY, BRAND TRUST, IMMUNITY TRUST, PERCEPTION OF CORONAVIRUS PANDEMIC						

Table 22 – Testing the Global Validity of the Intention to visit Model

Source: Author's elaboration using SPPS outputs

Coefficients[a]								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		$\widehat{\beta}$	**Std. Error**	**Beta**			**TOL**	**VIF**
2	(Constant)	-2,319E-18	,030		,000	1,000		
	PERCEIVED HEALTH RISK	-,596	,035	-,596	-16,900	,000	,722	1,385
	SOLIDARITY	,231	,034	,231	6,841	,000	,784	1,275
	BRAND TRUST	,127	,031	,127	4,057	,000	,921	1,086
	IMMUNITY TRSUT	,101	,030	,101	3,316	,001	,975	1,025
	PERCEPTION OF CORONAVIRUS	,081	,033	,081	2,415	,016	,807	1,240
a. Dependent Variable: INTENTION TO VISIT								

Table 23 – Intention to visit Model Coefficients and Testing

Source: Author's elaboration using SPPS outputs