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Should I stay, or should I go? Consumers' perceived risk and intention to visit restaurants during the COVID-19 pandemic in Brazil

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ABSTRACT

This study aimed to verify how consumers' intention to visit restaurants during the pandemic is affected by consumers' risk perception and different types of trust. The sample was composed of 546 consumers from 89 different cities in Brazil. An adapted 43 items questionnaire with 5-point scales was administered, and analyzed using structural equation modeling. The results indicate that consumers' trust in a restaurant and brand, fair price, solidarity with the restaurant sector, disease denial, and health surveillance trust predict intention to visit a restaurant during the COVID-19 pandemic. Age has significant moderated effects, reducing disease denial effects. The trust in restaurants and brands was the factor with the largest effect size. In a multigroup analysis, it was found that solidarity with the sector does not affect the intention to visit restaurants for consumers without formal work. It is discussed the implications of an increased consumers' risk perception, directly affecting their intentions. Special attention to consumers' trust and fair price perception is fundamental, given consumers' solidary inclination toward helping the restaurant sector. These aspects must be recognized by restaurant owners and managers to be improved and be used to attract consumers.

1. Introduction

On January 30, 2020, the World Health Organization (WHO) Emergency Committee declared a state of global emergency due to the pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Velavan & Meyer, 2020). According to Johns Hopkins University data, on October 10, 2020, 1,044,633 deaths were recorded worldwide due to SARS-CoV-2 (Johns Hopkins University, 2020). The same database indicated that Brazil is the country with the third-highest number of cases (4,927,235) and the second-highest number of deaths (146,675). Given the virus's characteristics of spreading rapidly among humans and having a high mortality rate, countries have adopted social distancing as the primary measure to contain the disease (VoPham, Weaver, Hart, Ton, White, & Newcomb, 2020). Social distancing is defined as the prohibition of gatherings, orders for people to stay at home, a reduction in urban mobility, and a stoppage of non-essential trade (Qureshi, Suri, Chu, Suri, & Suri, 2020). This includes the closing of restaurants, bars, and snack bars. Brazil's social distancing initiatives started approximately on March 14, 2020, and have been in force ever since, exhibiting some flexibility or tightening applied by

mayors and governors (Aquino, Silveira, Pescarini, Aquino, & de Souza-Filho, 2020).

Indeed, social distancing is promoted in the interest of public health and is necessary. However, the measure has important effects on the economy, especially in the restaurant sector (National Restaurant Association, 2020; Song, Yeon, & Lee, 2021). The restaurant sector has expanded substantially over the past few years. In 2018, a 3.5% increase in restaurant sales was observed in Brazil. For the year of 2019, the forecast increased by 5% (ANR - Associação Nacional de Restaurantes, 2018). Most of the meals taken outside the home are at lunch (Gorgulho, Fisberg, & Marchioni, 2014), mainly on weekdays. As a result, companies' measures to adopt teleworking, the closure of a large part of local businesses, and the prohibition of serving the public harmed the sector.

After several discussions, in most cities in Brazil, the operation of restaurants was authorized. There are specific laws and recommendations determined by the Health Surveillance sector in a few places in Brazil, such as São Paulo State (São Paulo, 2020). The number of seated restaurant dinners has been steadily increasing since the end of May, coming close to the levels observed at the beginning of 2020 (Lock,

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2020), demonstrating consumer interest in this service even during the pandemic. In recent studies, it was observed some positive aspects of the restaurant brand and consumers' perceived risk on his/her preferences for dining facilities in restaurants (Kim, Kim, & Wang, 2021; Kim & Lee, 2020). However, it is still unknown which factors drive consumers to visit restaurants during the pandemic, favoring the restaurant industry's recovery.

Motivated by the uncertainties and the impact of the pandemic on the restaurant industry sector, this research contributes to the health and economic areas. This study offers empirical evidence on how consumers' intention to visit restaurants during the pandemic is affected by consumers' risk perception and different types of trust, contributing with new results to recently published studies. We also identified situational drivers from the COVID-19 pandemic of consumer behavior about food away from home, expanding the risk perception theories.

First, we present the study hypotheses grounded in the literature review. In the methods section, it is described the methodological course, including modeling details. Then, we discuss the implications of increased consumers' risk perception, directly affecting their intentions. The theoretical and practical implications for both industry and policy are discussed.

2. Literature review

2.1. Impact of COVID-19 on the restaurant sector

In the last few years, the number of meals eaten exclusively at home has progressively decreased in Brazil. In contrast, the number of meals taken outside the home has increased (Nielsen, 2016). Having food away from home includes meals and snacks provided by restaurants, either consumed on-site or at home (Center for Development Data, 2017). The increase in this type of meal has made restaurants more present in people's daily lives, making requests for and trips to restaurants more frequent. However, the COVID-19 pandemic has substantially impacted the restaurant sector, especially businesses whose revenue comes mainly from face-to-face service. The global drop in restaurant reservations and on-site consumption in March reached 100% compared to the same period in 2019 in different countries (OpenTable, 2020). In March, in Brazil, there was a 68% reduction in visits to restaurants and snack bars (López, 2020). Unlike an exclusively economic crisis, in which the decline in consumption is gradual, the crisis caused by COVID-19 resulted in an abrupt drop in revenues (Richter, 2020). Special packages have been introduced to help the sector in some countries, such as the United States and the United Kingdom (ANR - Associação Nacional de Restaurantes, 2020). In Brazil, on the contrary, restaurant owners face difficulties in obtaining lines of credit. More than 70% of companies seeking new credit lines had their proposals rejected (ANR - Associação Nacional de Restaurantes, 2020). Of these restaurants' owners, 20% believe they will not sustain themselves after the pandemic (ANR - Associação Nacional de Restaurantes, 2020).

In this particular situation, we believe that consumers' intention to visit restaurants during the COVID-19 would be predicted by a set of marketing-oriented stimuli (price, perceived safety, and brand), politically oriented stimuli (social trust, politics, and culture), and consumers' perceptions (risk perception) and characteristics (age, employment status). The sector's crisis, resulting from COVID-19, as has been observed in other crises, can promote behavioral responses as a way of absorbing the shock of the imposed reality, awakening feelings of solidarity (Mishra & Rath, 2020). Social solidarity is cohesion between individuals and society, searching for order and social stability, allowing them to feel that can enhance others' lives. The effect of social solidarity may be stronger, especially for those most distant from social inequality situations, since the presence of this inequality undermines solidarity (Mishra & Rath, 2020). The lack of solidarity happens due to financial unavailability or a fragile and unfavorable situation, leading to solidarity non-adherence (Mishra & Rath, 2020).

Thus, those who have kept their jobs during the pandemic can awaken this sense of responsibility for other members of their community's well-being (Paskov & Dewilde, 2012), influencing people's actions in times of crisis in different situations and sectors. We then decided to include a factor called "solidarity with the restaurant sector" that may predict the intention to visit restaurants, mostly or strongly, for employed consumers. Based on this theoretical background, the following hypotheses are proposed:

H1 – Solidarity with the restaurant sector is positively related to the intention to visit restaurants during the pandemic.

H2 – Employment status moderate the effect of solidarity with the restaurant sector.

2.2. COVID-19 risk perception

At the beginning of the COVID-19 pandemic, there was not much information about the disease since COVID-19 was new. As the pandemic progressed across the countries, there was massive dissemination of novel information every day. Amid rumors and real information, the presence of anguish and anxiety has prevailed (Torales, O'Higgins, Castaldelli-Maia, & Ventriglio, 2020). This uncertainty alone can generate a feeling of being threatened (Taha, Matheson, & Anisman, 2014); however, in addition to this uncertainty, the various strict guidelines on isolation, social distancing, and wearing a mask can further increase fear. Although the presence of mental health problems due to the pandemic has already been confirmed (Torales et al., 2020), there has still not been an exact measurement of the anxiety the pandemic has caused. It is also known that other similar crises resulted in people experiencing high levels of this feeling (Kim et al., 2019; Lee, Kang, Cho, Kim, & Park, 2018).

As a reflex reaction to anxiety, there is the feeling of a threat (Taha et al., 2014). When a threat is perceived as high risk, mechanisms are created to face it, such as denial and rationalization (Bardon, 2019). Denial is the refusal to recognize an unpleasant truth or emotion or the failure to acknowledge that truth (Denial, 2020). Therefore, denial is the defense mechanism for rejecting the reality that arises in response to a threatening environment/situation (Basch, 1983). On the other hand, rationalization is the mechanism that uses reason: considering his/her beliefs and desires, interpreting the experienced risk with the desire that this risk is not real, the person starts to reduce his/her risk perception (Cushman, 2019). In the case of the pandemic, denial has been translated into non-belief in the disease. Statements such as "the epidemic is fake; it does not exist" are a clear example of denial, and "COVID is simply the flu; it is not as dangerous as they say" an example of rationalization. Both are related to the mechanisms of psychological representations that guide our future behavior (Cushman, 2019).

Risk perception is defined as assessing potential dangers that may represent a threat to an individual's health or well-being (Adeola, 2007). Individuals tend to make decisions intuitively, based on their perceived risk of an action resulting in an adverse event (Slovic, 1987). Therefore, people with reduced risk perception of COVID-19 may also exhibit negative attitudes, through a disregard for safety guidelines, rejecting masks, and promoting gatherings (Ríos, 2020b), resulting in an increased risk for themselves and others. Due to its capacity to shape behaviors, this poor adaptation in risk perception can influence other attitudes and practices that may be relevant in the context of the pandemic and help in understanding people's actions.

Consumers' purchase behavior is based on product or service attributes (Asioli et al., 2017; Grunert, 2005). Considering the utility maximization theory, the consumer makes decisions balancing perceived benefits and risks (Lancaster, 1971). Since risk perception is a subjective anticipation of possible consequences of wrong choices (Bonn, Chang, & Cho, 2020), disease denial will make the perceived benefits of visiting a restaurant salient (e.g., pleasure, social, etc.). In contrast, the risk of having the disease will be minimized, in a situation of low risk/ high benefit. This effect may happen not due to a low perceived probability of

having COVID-19 but mostly by a low perceived consequence or threat (Kim & Lee, 2020), explaining why disease denial may increase the intention to go to a restaurant during the pandemic.

Risk perceptions can be moderated by age. Younger people have a lower risk perception of adverse events that they understand as controllable, such as infectious diseases, and consequently, they have riskier behaviors (Weinstein, 1982). It is known that young adults and adolescents are less likely to comply with COVID-19 protection measures and public health guidelines (Nivette et al., 2021; Park et al., 2020; Webster et al., 2020). This behavior may happen due to this public's characteristics, such as low acceptance of moral rules, legal cynicism, and low guilt (Nivette et al., 2021).

In this study, we assessed the risk perception of Covid-19 as a disease denial factor. Thus, the following hypotheses are proposed:

H3 – Disease denial is positively related to the intention to visit restaurants during the pandemic.

H4 – Age is negatively related to the intention to visit restaurants during the pandemic (H4a) and moderate the effect of disease denial in the intention to visit restaurants (H4b).

2.3. Social trust

Trust is defined as a “necessary means of reducing uncertainty to an acceptable level and simplifying decisions” (Halk, 1993). Social trust is defined as the willingness to rely on those responsible for making decisions, such as maintaining a given technology, environment, safety, and health (Siegrist, Cvetkovich, & Roth, 2000); however, the definition is elusive. Social trust is a response to uncertainties, risk perception, and future orientation (Verducci & Schröder, 2010). In an uncertain future, such as the COVID-19 pandemic, people rely on institutions (i.e., government, health surveillance agencies, universities) to reduce their anxiety towards an uncontrollable hazard. The social trust may decrease the perception of risk and increase the perception of benefits affecting consumers' willingness to buy a product (Hakim, Zanetta, de Oliveira, & da Cunha, 2020).

The influence of the government and regulatory agencies on trust is present in the food sector. Restaurants with food safety certification (e.g., grade system) by government institutions can promote credibility to the consumer (Bai, Wang, Yang, & Gong, 2019). However, low confidence in the regulatory agencies can lead to distrust in the restaurant with the agency's approval for its operation (Kim & Song, 2020). In Brazil, the Health Ministry and Health Surveillance Agency (*Agência Nacional de Vigilância Sanitária* in Portuguese) are the central authorities responsible for defining the guidelines to deal with the pandemic in Brazil. Therefore, in this study, we used two factors to describe social trust: trust in the government and trust in the health surveillance sector.

It is the role of governments to guide their populations through crises generated by health issues. In 2003, the Hong Kong government was recognized by traumatizing its citizens and aggravating mental suffering during the Middle East Respiratory Syndrome (MERS) epidemic (Li, Cheung, & Lee, 2020). As in Hong Kong, events before the pandemic may also have interfered with social trust. In Nigeria, political corruption appeared to be an extremely relevant reason for the presence of distrust. Corruption hampered the population's acceptance of the government's protocols against COVID-19 (Ezeibe et al., 2020). The Dominican Republic has also experienced problems. Distrust of the government grew amid many protests stemming from an election. This political crisis added to the growing amount of falsified news, limiting the country's Ministry of Health's ability to respond to the pandemic (Tapia, 2020).

Like these countries and many others, Brazil is experiencing some moments of disease denial. Disease denial reflects the polarization of the population's political views (IPSOS, 2018) and the Brazilian government's divergent stance against WHO recommendations, similar to the U.S. and the U.K. governments (Falkenbach & Greer, 2020). At the beginning of the pandemic in Brazil, while the health minister

encouraged social distancing measures, in his pronouncements, the president asked the population to follow their “normal life” so as to minimize the damage to Brazil. As a result, public opinion on how the president and the Ministry of Health handled the new coronavirus outbreak became polarized (Ríos, 2020a). Due to divergence of the government's and the Health Surveillance sector's positions, the trust in each of these institutions can motivate different attitudes and be antagonistic. Trust implies accepting vulnerability based on others' expectations or opinions (Rousseau, Sitkin, Burt, & Camerer, 1998). Therefore, the relationship between people's trust in their government and their attitude toward the disease appears to be complex, depending on the government's characteristics. For this reason, we believe that trust in the government would be ideologically grounded and can increase the intention to visit a restaurant during the pandemic. In contrast, trust in the Health Surveillance sector may reduce the intention to visit restaurants since it is scientifically grounded. Thus, we have the following hypotheses:

H5 – Government trust is positively related to the intention to visit restaurants during the pandemic (H5a), while health surveillance trust is negatively related to the intention to visit (H5b).

H6 – Government trust is positively related to disease denial (H6a), while health surveillance trust is negatively related to it (H6b).

2.4. Brand and restaurant trust

Aaker (1991) defines a brand as “a distinguishing name or symbol (such as a logo, trademark, or package design) intended to identify the goods or services of either one seller or a group of sellers, and to differentiate those goods or services from those of competitors.” From this definition, it is possible to realize that a brand has a vital role in differentiating products and services. When developing their products and services, companies look for ways to connect with their customers, to make their brands irreplaceable and to create connections that persist over time (Wheeler, 2017). A strong brand is “a safe place for customers” (Richards, 1998).

A satisfactory presentation of the brand, communication of its values, adequate production, and high quality standards can build consumer confidence by creating positive associations with the brand (Berry, 2000; Ozdemir, Zhang, Gupta, & Bebek, 2020). Brand associations positively affect brand reputation, which is a decisive factor in shaping brand trust (Han, Nguyen, & Lee, 2015). Trust in the brand is the feeling of security that the consumer has in his/her interaction with the brand, reflecting the belief that the brand is taking care of them, doing whatever is necessary to meet their needs (Chao-Chin, 2017; Hess, 1995; Munuera-Aleman, Delgado-Ballester, & Yague-Guillen, 2003). Restaurants known and frequented by many consumers generate a feeling of trust. This feeling is so genuine that consumers assess the risk of eating in these restaurants as extremely low, similar to the risk they attribute to eating in their homes (de Andrade, Rodrigues, Antongiovanni, & da Cunha, 2019). Thus, through trust, it is possible to measure the relationship between the consumer and a brand. Consumers often use different mechanisms to reduce the risks, uncertainties, and anxiety related to choices. Among the various mechanisms described in previous studies, brand and restaurant trust are major positive factors affecting consumers' intentions (Lacey, Bruwer, & Li, 2009; Mitchell & McGoldrick, 1996). In China, it was observed that a branded restaurant had a large number of sales than non-branded restaurants during the pandemic of COVID-19 (Kim et al., 2021).

Therefore, extrinsic trust in restaurants' ability to deal with COVID-19 can increase consumers' intention to visit them, especially in cases of well-known restaurants. This leads to the following hypotheses:

H7 – Perceived safety and well-known restaurant brands are positively related to the intention to visit restaurants during the pandemic.

H8 – Perceived fair price is positively related to the intention to visit restaurants during the pandemic.

2.5. Proposed research model

The proposed research model (Fig. 1) was established to gain a comprehensive understanding of consumers' intention to visit a restaurant during the pandemic, based on risk perceptions and trust. In the model, we also included the fair price, a well-established factor affecting willingness to buy foods, and visit restaurants (Maxwell, 2002; Rintamäki et al., 2007).

3. Methods

3.1. Sample and data collection

Data were collected using the online platform Google Forms (Alphabeth Inc. Mountain View – U.S.). A non-probability purposive, with chain-referral sampling was employed. Facebook, Instagram, WhatsApp, and SMS (short message service) were used to invite consumers. All participants had to be Brazilian and over 18 years old. No restrictions were applied regarding place of residence, sex, or level of education. The minimum sample was established following Hair, Hult, Ringle, and Sarstedt (2016) based on the number of arrows pointing constructs (i.e., ten arrows), minimum R² of 0.10 in any endogenous constructs for a significance level 1%, and 80% of sample power. Since

the study population is large and accessible and that online research was employed, an increased sample number of n>212 was desired to reduce sampling error and increase heterogeneity (Hair, Risher, Sarstedt, & Ringle, 2019).

Some questions were included with an inverted answer to increase participants' engagement and reduce bias. All participants signed an informed consent form electronically. The University of Campinas Ethics Committee approved the study (Protocol: 15065019.3.0000.5404).

3.2. Pandemic situation during the study

All consumers answered the questionnaire during the first week of October 2020. According to data from the Johns Hopkins University (Johns Hopkins University, 2020) platform, during this period, Brazil presented 4,915,289 cases of COVID-19 and 146,352 deaths from it. Seven-day moving averages of 664 and 659 deaths per day were observed on the first and last day of the research, respectively.

3.3. Measures

A questionnaire was administered to evaluate consumers' perceptions of risk and trust related to the COVID-19 pandemic and the

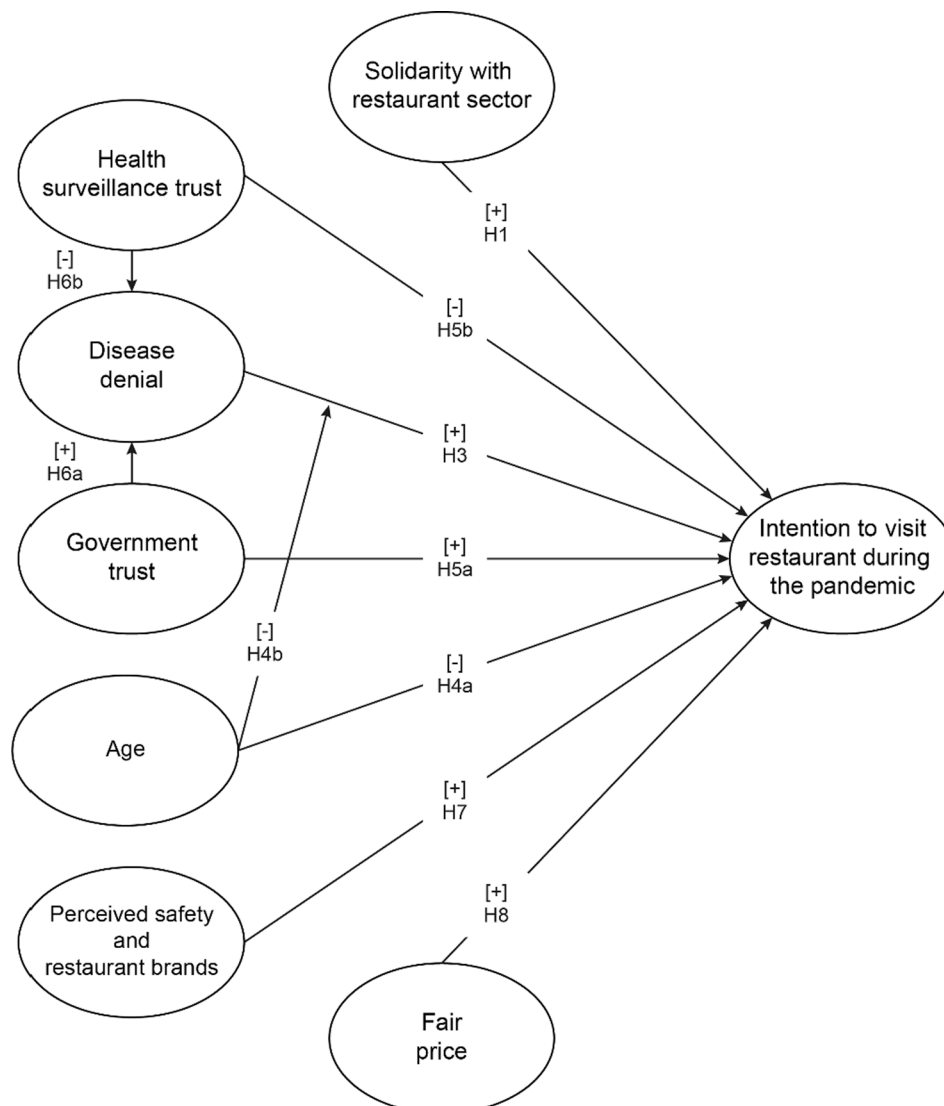


Fig. 1. Proposed model. The positive and negative sign indicates the hypothesis direction

reopening of bars and restaurants. The questionnaire had 43 items and was adapted based on several studies and data (Bolek, 2020; Costa, 2020; de Jonge et al., 2004; Hakim et al., 2020; Ngo, Liu, Moritaka, & Fukuda, 2020; Omari, Ruivenkamp, & Tetteh, 2017; Poortinga & Pidgeon, 2003; Siegrist, Earle, & Gutscher, 2003; Statista, 2020b, 2020a). As studies with some constructs of interest (i.e., solidarity with the restaurant sector and health surveillance trust) were not found, new questions were created for this purpose. Three 5-point Likert scales were used to measure the items: a trust scale ranging from 1 (totally distrust) to 5 (totally trust), an agreement scale ranging from 1 (totally disagree) to 5 (totally agree), and a willingness scale ranging from 1 (totally unwilling) to 5 (totally willing).

The questionnaire was designed and adapted to evaluate the following latent variables: social trust (divided into government trust and health surveillance trust), disease denial, perceived safety, fair price, solidarity with the restaurant sector, brand, source of information, and willingness to go to a restaurant. Some items were removed to increase the constructs' validity and reliability. Table 1 shows the items and references for each factor.

The employment status was evaluated in five categories: a) employed working in person; b) employed working remotely; c) with a suspended contract or not working due to the pandemic; d) informal work and; e) unemployed. The employment status was categorized into two groups: formal work (a and b) and informal work or unemployed (c, d and e).

3.4. Data analysis

Common-method bias was assessed using Harman's single factor score (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) (< 50% variance). A single factor explaining 36.5% of the total variance was extracted, suggesting that common-method bias did not affect the data.

Partial least squares structural equation modeling (PLS-SEM) was selected to analyze the data, for several reasons. PLS-SEM minimizes sample size limitations, can effectively handle models that include both formative and reflective measures, and makes no distributional assumptions (Henseler, Ringle, & Sinkovics, 2009). A bootstrapping procedure with 5,000 samples was used to estimate the t-statistics (significance: $t > 1.96$) and the p values (significance: $p < 0.05$) of the estimated loadings.

The multigroup analysis (MGA) was used to test the moderating effect of employment status and sex. The measurement invariance of composite models (MICOM) was performed to confirm if the differences between groups are due to differences in the structural model and not in the measurement model (Henseler, Ringle, & Sarstedt, 2016). MICOM was established in three steps (1) configural invariance; (2) compositional invariance by comparing the original correlation c with the 5%-quantile of c_{it} and; (3) the equality of composite mean values and variances by comparing equality of means and variance using a non-parametric permutation test (Henseler et al., 2016).

There were no problems with missing data. The volunteer had to complete the entire form before submission. Statistical analyses were performed using Statistical Package for Social Sciences (SPSS) v.20 (IBM Corp. Armonk - U.S.) and SmartPLS v3.2.8 (SmartPLS GmbH, Bönningstedt - Germany) (Ringle, Wende, & Becker, 2015).

4. Results

The sample was composed of 546 consumers from 89 different cities in Brazil. Most of the respondents were female (67%), with an average (standard deviation) age of 38 (13.8) years. They were highly educated (75% had a higher education), with a formal job (74%), and with particular health insurance (80%). Approximately 15% of the respondents indicated that they needed emergency assistance provided by the government (BRL 600 \approx USD 108 USD).

In our consumer sample, 146 (26.9%) are employed working in person, 256 (47.1%) employed working remotely, 24 (4.4%) are with a

Table 1
Validity and reliability of constructs

Construct/Item	Factor loading	Mean (SD)	CR	AVE
Government trust (adapted from de Jonge et al., 2004; Hakim et al., 2020; Ngo et al., 2020)			0.82	0.61
How much do you trust the government to offer intensive care unit beds to everyone in need due to Covid-19?	0.833	2.05 (1.1)		
I trust the government to control the risks due to Covid-19.	0.896	1.66 (0.9)		
How much do you trust the government's information and news about the Covid-19 pandemic?	0.600	2.12 (1.0)		
Disease denial (adapted from Costa, 2020)			0.84	0.57
It would be better to go back to normal, even if some people die.	0.825	1.45 (0.9)		
If my friends or family are not isolated during the pandemic, I also do not need to be isolated.	0.699	1.49 (0.9)		
There is no point in avoiding the coronavirus now and catching it later.	0.668	1.57 (1.0)		
I am not afraid of contracting the disease; it is simply the flu.	0.800	1.29 (0.7)		
Health surveillance trust (adapted from de Jonge et al., 2004; Hakim et al., 2020; Ngo et al., 2020)			0.85	0.59
Health Surveillance Inspectors are competent enough to guarantee health-related safety in restaurants and bars.	0.760	2.94 (1.3)		
Health Surveillance inspectors inspect restaurants randomly, without favoring anyone.	0.776	2.23 (1.1)		
Surveillance Inspectors fine only establishments that deserve it.	0.680	2.72 (1.2)		
How much do you trust Health Surveillance to inspect, regulate, and enforce the legislation and rules for reopening bars and restaurants?	0.850	1.89 (0.9)		
Perceived safety and restaurant brand (adapted from Hakim et al., 2020; Ngo et al., 2020)			0.86	0.63
I feel safe going to a restaurant to eat a meal, even if there is no medicine or vaccine for Covid-19.	0.880	2.19 (1.3)		
I believe that it is safe to reopen restaurants	0.904	2.15 (1.1)		
I am sure that the restaurants and bars I know/frequent are reliable in terms of ensuring health safety	0.840	2.25 (1.2)		
I always choose to go to bars and restaurants that I know/frequent.	0.554	3.13 (1.5)		
Fair price (adapted from Hakim et al., 2020)			0.93	0.82
I would go to bars and restaurants during the pandemic if they are not more expensive than before.	0.913	1.70 (1.1)		
I would eat in bars and restaurants during the pandemic if the eat-in prices are lower than delivery ones.	0.812	1.62 (1.0)		
I would eat in bars and restaurants during the pandemic if prices are fair	0.924	1.90 (1.3)		
Solidarity with the food services sector			0.97	0.93
I would go to bars and restaurants during the pandemic to prevent them from closing permanently.	0.968	2.17 (1.3)		
I would go to bars and restaurants during the pandemic to prevent sector employees from becoming unemployed.	0.965	2.29 (1.3)		
I would go to bars and restaurants during the pandemic to channel money into the sector.	0.953	2.06 (1.2)		

(continued on next page)

Table 1 (continued)

Construct/Item	Factor loading	Mean (SD)	CR	AVE
Intention to visit (adapted from Jang, Chung, & Kim, 2015)			0.94	0.85
If restaurants or bars open in my city, I intend to go there.	0.938	2.04 (1.2)		
If restaurants or bars open in my city, I am interested in visiting them in the coming days.	0.933	2.00 (1.2)		
How willing are you to go to restaurants and bars while there is no medicine or vaccine for Covid-19?	0.899	2.20 (1.3)		

suspended contract or not working due to the pandemic, 52 (9.6%) working informally and; 65 (12%) are unemployed.

A model was constructed with the following factors: government trust, disease denial, health surveillance trust, perceived safety, fair price, solidarity with the restaurant sector, and intention to visit a restaurant during the pandemic.

The constructs' reliability and validity were verified using composite reliability (CR), Cronbach's alpha, factor loadings, and average variance extracted (AVE). All factor loadings exceeded 0.55. All latent variables presented Cronbach's alpha and CR values exceeding 0.70. The AVE of all factors exceeded 0.50 (Table 1), indicating an adequate convergent validity. All values exceeded those recommended by Hair et al. (2016), demonstrating adequate reliability. The heterotrait-monotrait (HTMT) ratio of correlations and the Fornell-Larcker criterion were used to test discriminant validity (Hair et al., 2016; Henseler et al., 2009). The HTMT values ranged between 0.14 and 0.84, below the threshold of 0.85, demonstrating adequate discriminant validity. Table 2 presents the square root of correlations among constructs for a better understanding of discriminant validity. The constructs' AVE exceeded the square root of their highest correlatios (i.e., Fornell-Larcker criterion), confirming an adequate discriminant validity. No multicollinearity issues were detected since VIF (variance inflation factor) for most variables was below 3.5 (Hair et al., 2019). The first two variables of the intention to visit restaurants presented higher VIF (4.0 and 3.8). Despite high, those values are less than 5.0, indicating no critical multicollinearity issue. Based on these results, the constructs presented adequate reliability and discriminant and convergent validity.

Table 1 also shows the mean values of each construct and items. The constructs government trust, fair price, and disease denial presented items with lower scores. The items with the largest scores were observed for the Health Surveillance trust. The average intention to visit restaurants during the pandemic was 2.07. This result indicates that

Table 2
Discriminant validity with Fornell-Larcker criterion – Square root of average variance extracted

Factor	1	2	3	4	5	6	7
Disease denial (1)	0.754						
Government trust (2)	0.202	0.787					
Solidarity with the food services sector (3)	0.427	0.184	0.973				
Fair price (4)	0.494	0.194	0.705	0.908			
Perceived safety and restaurant brand (5)	0.430	0.369	0.588	0.608	0.794		
Intention to visit (6)	0.524	0.251	0.677	0.698	0.776	0.922	
Health surveillance trust (7)	0.005	0.443	0.154	0.076	0.293	0.132	0.767

consumers, on average, were not inclined to visit restaurants during the pandemic.

In the second stage, it was checked the structural model through predictive relevance (Stone-Geisse's $Q^2 > 0.15$) and effect sizes (f^2), following Henseler et al. (2009) recommendations. The dependent variable (intention to visit) presented satisfactory R^2 (0.71) and Q^2 (0.61) values. All the significant effects exhibited f^2 values exceeding 0.01, suggesting small to medium effects for disease denial (0.041), fair price (0.054), health surveillance trust (0.02), and medium to high effects for solidarity with the sector (0.064) and perceived safety and brand (0.46).

Fig. 2 presents the final inner path model. Hypotheses 1, 3, 4b, 5b, 6a, 7 and 8 were supported, while hypotheses 4a, 5a and 6b were not. In this sense, the intention to visit restaurants was affected by consumers' solidarity with the restaurant sector (H1: $\beta = 0.202$; $t = 4.861$; $p < 0.001$), disease denial (H3: $\beta = 0.124$; $t = 4.134$; $p < 0.001$), trust in health surveillance (H5b: $\beta = -0.060$; $t = 2.062$; $p = 0.039$), perceived safety and brand (H7: $\beta = 0.514$; $t = 12.805$; $p < 0.001$), and fair price (H8: $\beta = 0.183$; $t = 4.170$; $p < 0.001$). The hypothesis 2 is presented below, in the MGA section. We also found that age (H4a: $\beta = -0.041$; $t = 1.642$; $p = 0.101$) did not affect intention to visit, but moderate the effect of disease denial towards intention to visit (H4b: $\beta = -0.075$; $t = 2.199$; $p = 0.028$) but with small effect size. The trust in government did not affect the intention to visit (H5a: $\beta = -0.006$; $t = 0.215$; $p = 0.829$). Contrarily, government trust positively affects (H6a: $\beta = 0.248$; $t = 4.932$; $p < 0.001$) disease denial, while, health surveillance trust (H6b: $\beta = -0.105$; $t = 1.549$; $p = 0.11$) did not affect disease denial.

In MGA, we have not found differences between sexes. Although, we found differences between employment statuses. First, we studied the MICOM. Both employment status groups presented adequate configuration invariance. This is confirmed since both groups have identical indicators per model and had identical data treatment. Also, the data from both emerge as a unidimensional entity in the same nomological net. The sample was adequate in both groups since it presented power above 80%, considering Hair et al. (2016) recommendations. The compositional invariance was confirmed since c was equal or greater than de 5%-quantile. Finally, the composite equality was calculated and measured. We find a partial invariance for age (logarithm of variances difference) and disease distrust (mean value difference). Those results indicate the data could benefit from MGA.

The model for consumers with formal work ($n = 405$) was similar to the final inner path model, with R^2 (0.73). The hypotheses 1, 3, 5b, 6a, 7, and 8 were supported for this specific group. However, for the informal work or unemployed ($n = 141$) sample, we found a different model ($R^2 = 0.74$). For this group, we could not confirm hypothesis 1, i.e., the solidarity with the restaurant sector not affects intention to visit restaurants during the pandemic (Table 3). We also found that hypothesis 5b and 6a were not supported for this specific group. Thus, hypothesis 2 was also confirmed that employment status could moderate the effect of solidarity.

5. Discussion

5.1. Theoretical implications

In this study, the total variance explained by the proposed factors was 72%. This high R^2 value (Hair et al., 2016; Henseler et al., 2009) indicated that our model demonstrated adequate explanatory power. Based on this result, we can affirm that the intention to visit a restaurant during, and probably immediately after, the COVID-19 pandemic is predicted by consumers' trust in a restaurant and brand, fair price, solidarity with the restaurant sector, disease denial, and health surveillance distrust. This is a new and important result since the pandemic may affect the restaurant industry for an extended period, considering the logistical problems affecting vaccine distribution. It has been recently stated that the epidemic in various countries is far from over



Fig. 2. Final inner path model. The numbers represent the path coefficient values (β), and the numbers within parentheses represent the p-values of the t-Statistics (based on bootstraps with 5000 samples).

Table 3
Structural equation models with estimates and hypotheses for the multigroup Analysis

	Consumers with formal work (n=405)			Consumers with informal work or unemployed (n=141)		
Model Variables	Path coefficient values	p	Label	Path coefficient values	p	Label
H1: Solidarity with restaurant sector → Intention to visit	0.25	<0.001	Supported	0.06	0.33	Not supported
H3: Disease denial → Intention to visit	0.08	0.02	Supported	0.23	<0.001	Supported
H4a: Age → Intention to visit	-0.008	0.75	Not supported	-0.10	0.06	Not Supported
H4b: Moderated effect of age in disease denial	-0.03	0.33	Not supported	-0.06	0.14	Not supported
H5a: Government trust → Intention to visit	0.03	0.25	Not supported	-0.08	0.19	Not supported
H5b: Health surveillance trust → Intention to visit	-0.07	0.02	Supported	-0.01	0.83	Not supported
H6a: Government trust → Disease denial	0.33	<0.001	Supported	0.07	0.43	Not supported
H6b: Health surveillance trust → Disease denial	-0.13	0.06	Not supported	-0.03	0.83	Not supported
H7: Perceived safety and restaurant brand → Intention to visit	0.48	<0.001	Supported	0.55	<0.001	Supported
H8: Fair price → Intention to visit	0.19	<0.001	Supported	0.20	0.01	Supported

*Bold values indicate significant effects

(The Lancet, 2020).

This research has some important theoretical implications. Our model highlights the importance of perceived safety and brand in increasing consumers’ intention to visit a restaurant during the pandemic, as consumers may be more concerned with food safety since the beginning of the pandemic (Kitz, Charlebois, Walker, & Music, 2020). Despite being concerned about their health, safety is generally not the main factor in explaining consumers’ restaurant choices

(Mazziero, 2018). Consumers do not fully perceive the level of food safety while in a restaurant (de Andrade et al., 2019), mainly because food safety can only be better observed “behind the counter.” Consumers’ perception of food safety ends up being limited to the sensory aspects of meals (e.g., unpleasant smell) and the restaurant’s main areas characteristics (e.g., cleanliness) (Bai et al., 2019). Thus, a restaurant’s protective measures against COVID-19 are conspicuous and visible since many involve the main area (e.g., social distancing, posted signs,

cleanliness, and ventilation) (US Food and Drug Administration, 2020). Another critical factor is that COVID-19 is still causing a “feeling of dread” among the population, affecting consumers’ risk perception. According to Slovic (1987), pandemics and other global catastrophic hazards significantly increase risk perception. Other factors contribute to an increased risk perception regarding COVID-19, such as massive media coverage of the disease (Frewer, Miles, & Marsh, 2002) and low perceived control (Horswill & McKenna, 1999). In this case, with increased risk awareness, consumers’ pressure on restaurants to comply with regulations will be greater. Restaurant managers and owners must strive to keep their customers safe and ensure that they also feel safe. Such actions may increase customers’ intentions to patronize restaurants and gradually reduce the pandemic’s economic consequences.

The opening of the restaurants during the pandemic, *per se*, stimulates unsafe practices since the reopening of restaurants is supported by legislation (São Paulo, 2020). This regulation, and other regulation on easing protection measures, and favoring economic issues, may increase consumers’ perceived safety and control. Inappropriate practices may be related to behavior in situations of freedom (Koc, 2013). In other words, considering that restaurants are open, people have the opportunity to distract themselves and socialize, it will allow them to make free choices by an increased perceived control. Control is a predominant psychological need in humans (Bateson, 2000). Satisfying this need reduces risk perception (Koc, 2013) and increases their optimism (da Cunha, Braga, Passos, Stedefeldt, & de Rosso, 2015). Therefore, the consumer may neglect protective behaviors in situations without controls. In this circumstance, the consumer tends to adopt a behavior different from the usual, described as liminoid behaviors. This behavior seems to respond to everyday pressures, helping the people ignore institutionalized rules, norms, and values, leading to unsafe behavior (Graburn, 1978; Koc, 2013).

According to our results, the pandemic has evidenced solidarity as a new, untapped, and situational factor affecting consumers’ intention to visit restaurants. Being kind to and solidary with those in need can increase their ability to overcome problems (Nurullah, 2012). Solidarity is also a frequent theme in discussions on COVID-19 and was central in some speeches by WHO representatives, who understand that it is one way to minimize the negative economic effects of the COVID-19 pandemic (Arab-Zozani & Hassanipour, 2020). Employed consumers seem to exhibit empathy for businesses and workers during the COVID-19 pandemic, based on a resilience perspective. Solidarity appears mainly when an identity is perceived among different people. This identity highlights the commitment to defend those belonging to this invisible alliance (Coughlin, 1990; Fireman & Gamson, 1977), increasing feelings of duty, responsibility, and joy. For example, researchers from Pakistan investigated positive and negative sentiments about COVID-19 based on news headlines. They found that the words “working,” “food,” “aid,” “markets,” and “support” provoked positive sentiments (Aslam, Awan, Syed, Kashif, & Parveen, 2020). The concern about an economic crisis, associated with positive feelings aroused by the admiration of those working during the pandemic, may explain this solidarity. Some studies state and discuss consumers’ appreciation of charitable and sustainable companies (e.g., through green buying) (Yen, 2018). As expected, unemployed consumers do not show the inclination to solidarity since they are in an unfavorable situation, and social inequality undermines solidarity (Mishra & Rath, 2020).

The age did not affect the intention to visit a restaurant. However, age moderated the effect of the disease denial. Older consumers are less subject to the disease denial effect and rely more on control measures to support their decisions. This may be related to the fact that the risk of COVID-19 is greater with the increasing age (Jin et al., 2020). Additionally, as mentioned, the risk perception also increases over the years for adverse events that they understand as controllable (Marsola, Cunha, De Carvalho-ferreira, & da Cunha, 2020). As already mentioned, this happens because young adults have lower acceptance of moral rules, guilt, self-control than older adults (Nivette et al., 2021).

Finally, we expected that confidence in the government could increase consumers’ intention to visit restaurants during the pandemic. Brazil’s current president’s lack of posture against the COVID-19 pandemic probably affected our results (Falkenbach & Greer, 2020). The position of Brazil’s current president, discouraging security measures against Covid-19, is well known, referenced in scientific journals (Falkenbach & Greer, 2020; Lancet, 2020). The current Brazilian president is defined as extreme right-wing. In other research, people who trust more on right-learning media are engaged in fewer preventive behaviors and more risky behaviors related to COVID-19 (Zhao, Wu, Crimmins, & Ailshire, 2020). This can be also observed by our results, especially the negative effect trust in the health surveillance sector has on intention to visit a restaurant, the positive effect of government trust on disease denial, and the nonsignificant effect of trust in the health surveillance sector on disease denial.

5.2. Practical implications

Based on health issues, the reopening of restaurants poses a risk to the population. Even with distance measures, the contamination in the foodservice environment is possible (Jones et al., 2020). However, considering economic issues, the reopening is the possibility of a resumption of the economic growth in the sector. Perceived safety and brand was the latent variable with the largest effect size (f^2). According to OECD data, Brazilian consumer confidence index fell dramatically during the pandemic period (OECD, 2020). However, some strategies can help the restaurant sector to regain the public’s trust, such as being transparent, avoiding calming consumers through a false sense of security, using security protocols rigorously, demonstrating credibility, using accurate and reliable information, and prioritizing consumer safety (Wilson et al., 2016). Therefore, the first practical suggestion is that restaurant owners should invest in safety aspects, applying in full the recommended security protocols, like those from the U.S. (US Food and Drug Administration, 2020), Canada (Toronto Public Health, 2020), Brazil (São Paulo, 2020) and United Kingdom (UK Food Standard Agency, 2020). Also, safety measures must be widely publicized (e.g., on social networks, posters, and television) and be noticed by customers. If a customer notices that a restaurant’s employees and managers are negligent about safety measures, it can drastically affect his/her intentions to patronize the restaurant. A restaurant’s brand, based on its reputation, is used by consumers to infer quality, which reduces their perception of risk and uncertainties regarding safety measures in cases of well-known brands (Kim, Kim, Lee, & Tang (Rebecca), 2020). Further, we know the importance of word of mouth in restaurant selection (Yrjölä, Rintamäki, Saarijärvi, Joensuu, & Kulkarni, 2019). A high-safety perception will be reflected in a restaurant being recommended to others and receiving positive evaluations.

Second, a fair price was a significant factor affecting the intention to visit a restaurant. During and after the pandemic’s critical phase, efforts are needed to maintain the service’s usual price or to apply minimal increases. Change in consumer behaviors is common during periods of crisis. At the start of the pandemic, consumer behavior reflected an increased risk perception and the fear of not having their basic needs met (Flatters & Willmott, 2009). However, even if there is an increase in spending, consumption criteria become different during and after crises. With the rise of insecurity, economic uncertainty, and unemployment, consumers have grown cautious regarding their expenses, postponing their demands for durable goods and discretionary services (Sheth, 2020). This can be seen in the current society as a search for more sustainable consumption (Mehta, Saxena, & Purohit, 2020). As observed in other crises, these trends are often not momentary, and some characteristics may persist after the crisis (Flatters & Willmott, 2009). So, discount and loyalty programs may also be an interesting strategy for attracting consumers. Special attention to the two points above is fundamental, given consumers’ solidary inclination toward helping restaurants and the food services sector. Restaurant owners and

managers can benefit from this factor, which is temporary.

Although restaurant owners can use strategies to regain consumer confidence, we also emphasize the government's importance in the resumption of the sector's economy. By being transparent about the public health benefits of security protocols, policymakers can increase the rate of adherence to these measures by consumers and restaurant owners (Webster et al., 2020). Health surveillance agencies must monitor the restaurant's security measures, allowing the opening and functioning of restaurants based on the epidemiological indicators and the availability of hospital beds.

5.3. Study limitations and future research

Although the study findings show novel results and shed light on consumer behavior during the Covid-19 pandemic, readers should interpret our results being aware of some limitations. Due to the situation of the Covid-19 pandemic, the study took place online. The limitations of online surveys are already known (Evans & Mathur, 2005), and their results should be interpreted carefully. Our results have limited generalizability to different countries or even other parts of Brazil. Given the socioeconomic differences in Brazil, the responses may differ for low-income populations without access to the internet and less frequent eating outside the home. The current study could be considered a preliminary effort to understand consumers' intention to go to a restaurant, guiding the sector through the reopening of restaurants.

The epidemiological scenario of the COVID-19 pandemic is different each month. It is possible to see the phenomenon of the second wave of the disease in several countries. 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 of and information about Covid-19 are quite dynamic. Consumer perceptions can change dramatically if effective vaccines for Covid-19 are authorized. Longitudinal studies can better capture consumer perception, which is also dynamic and influenced by situational issues.

6. Conclusion

This study showed the different factors that affect the consumers' intention to frequent restaurants during the Covid-19 pandemic in Brazil. The factors perceived safety and brand, and fair price have a positive effect on visiting restaurants. These aspects must be recognized by restaurant owners and managers to be improved and be used to attract consumers. A new factor, called solidarity to the sector, has emerged as a significant driver in visiting restaurants during the pandemic for employed consumers. We understand that this is a situational factor and is likely to weaken over time. This may be due to a possible improvement of the epidemiological scenario or by consumers' indifference. Researchers should explore solidarity in specific contexts, for example, consumers' intention to purchase traditional communities' food and accommodation. In this case, solidarity can be related to social concern, low financial resources, food insecurity, and other aspects of social vulnerability.

Social trust factors have also been shown to influence the decision to visit restaurants, showing the impact of governments and health surveillance agencies on the consumers' decision. Trusting the government has positively affected the disease denial, moderating the intention to visit restaurants. Regardless of the government's ideological alignment (e.g., left- or right-wing), the government and health surveillance agencies must be a reliable source of information, minimizing the pandemic's negative impacts on health and the economy.

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CRedit authorship contribution statement

Mariana Piton Hakim: Conceptualization, Investigation, Methodology, Writing - original draft. **Luis D'Avoglio Zanetta:** Conceptualization, Methodology, Visualization, Writing - original draft. **Diogo Thimoteo Cunha:** Conceptualization, Formal analysis, Software, Methodology, Funding acquisition, Supervision, Writing - original draft, Writing - review & editing.

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