

Changed Buying Behavior in the Corona Pandemic: Perceived Risk and its Effects

Abstract

The COVID-19 pandemic hit the retailing sector unprepared and hard. Some customers are beginning to hoard and panic buying, while others are going to less frequented stores or shopping online more often. Others do not change their behavior and seem not to be affected. This study examines the buying behavior and risk perception of customers. The execution of qualitative in-depth interviews in Brazil provides insights into the perceived risk and buying behavior of customers. The results are compared to the customers responses of a similar study conducted in Germany.

Only a very few studies focus on customer behavior in an extreme situation such as the COVID-19 pandemic. This study deals with the question how buying behavior is influenced by the perceived risk and vice versa. We gain insights that explain the changed buying behavior during the challenging Corona crisis and different behaviors and motives in Brazil.

The consideration of the risk perception and the buying behavior of the customers from countries in different stages and with strategies in future studies will help to derive a deeper knowledge. Especially the consideration of the different types of consumers with their individual risk perception helps to explain why current buying behavior partly contradicts theoretical findings. Especially when buying in stores, it is important to identify the mechanisms that provide a sense of security in the background to encourage customers to buy locally rather than online. This study provides some pointers on how precautionary measures can be used to create a positive shopping experience.

Keywords: COVID-19 pandemic, buying behavior, perceived risk.

Introduction

A common feature of crises is that those affected are faced with an unexpected situation. Organizations and people are not used to such situations and are largely unprepared for them (Bapuji et al., 2020). The current COVID-19 crisis differs from previous crises (Zwanka & Buff, 2020) in terms of the range and extent of its effects. The magnitude is due to the global nature of a pandemic, the obvious threat posed by the high death toll.

In the context of online shopping, consumer behavior research often points out that perceived risk inhibits buying behavior (Wei, Wang, Zhu, Xue, & Chen, 2018). There the perceived risk refers to expected loss of purchases, lower quality or delayed delivery. During the COVID-19 pandemic, perceived risk includes a more fundamental expected loss of health or loved ones and the likelihood of loss of autonomy due to quarantine measures. These risks have a direct impact on customers, which is why we expect them to have a direct and immediate influence on purchasing behavior.

The risks in shopping resulting from the COVID-19 pandemic include not only health and social risks but also shortages due to price changes and product shortages. The changes in shopping are manifested in various facets, such as changes in shopping frequency, the choice of shops and brands, the change from offline to online channels and the stocking of non-perishable food and hygiene products. In particular, stockpiling (or the inability to stockpile due to e.g. closures, sellouts, lack of money) is a manifestation of emotional self-regulation that affects risk perception. In addition, the acceptance of precautionary measures and social distancing is considered in order to obtain a comprehensive overview of possible coping strategies.

The research aim arising from embedding the above research question in the empirical context. Consolidating this study addresses the following aims:

1. Clarify how and to what extent perceived risk influences Brazilians emotional self-regulation (sales therapy, panic buying and safety stock).
2. Clarify how and to what extent perceived risk of Brazilians influences scarcity (shortages, price change anticipations and safety stocks).
3. Clarify how and to what extent precaution acceptance (crisis related articles, store atmosphere, feelings regarding prevention, risk perceptions COVID-19, fear) influences the perceived risk of Brazilians.

The remainder of this paper is structured as follows: First, this study consolidates the previous research in order to provide a sound theoretical framing. For this, buying behavior in the context of crisis are systematized. Afterwards, the study focusses on the emotional self-regulation through buying, especially through stockpiling and retail therapy. The discussion of various precautions and their acceptance completes the topic. The second section focuses on the qualitative survey, presents the methodology and highlights the research context. Successively, the results of the interviews are systematized. This paper closes with the discussion and derivation of practical implications and an outlook for further research.

Related Research

Responses in Buying Behavior – Shocks and their impact on the buying behavior.

From time to time, there have always been far-reaching crises. Consumer and buying behavior is not unaffected by this, as crises often lead to risk avoidance behavior (Fortin & Uncles, 2011). The COVID-19 pandemic challenges people and companies alike. Visiting shops is characterized more by fears and worries on both sides, among sales staff and customers, than by joy and positive feelings. (Roggeveen & Sethuraman, 2020). Therefore, reducing the number of visits to the shops and the duration of purchases seems to be a rational behavioral adjustment. However, visiting shops could indicate that customers do not expect a shortage of needed goods, as they would otherwise make more panic buying.

Studies of (food) purchases have shown that customers are quite heterogeneous in terms of regularity and frequency (Kim & Park, 1997). The relationship between shopping frequency and sociodemographic has been investigated (Bawa & Ghosh, 1999). The effect of situational factors such as shop environment or available time on purchasing behavior is also considered (Park, Iyer, & Smith, 1989).

Many factors influence shopping behavior. Emotions in particular are regarded as important determinants (Vinson & Pearson, 1974). Cognitive aspects are often associated with decisions made in shops and equally planned purchases. A negative experience in a store cancels out the influence of positive feelings the customer previously had. Negative feelings, on the other hand, are reinforced (Sherman, Mathur, & Smith, 1997). Research has found mixed effects when it comes to transferring the influence of motives, beliefs and values on purchase intentions or even actual purchases (Magnusson, Arvola, Hursti, Åberg, & Sjöden, 2003; Michaelidou & Hassan, 2008; Padel & Foster, 2005).

Panic buying appears sometimes in the media. Panic buying refers to the action of buying large quantities of a particular product or commodity (Zheng, Shou, & Yang, 2020). A central role in explaining the phenomenon of panic buying is played by customer fears (Darrat, Darrat, & Amyx, 2016). This phenomenon occurs particularly in the case of sudden fears of an impending shortage or a price increase. Hoarding, with its emphasis on the practice of collecting or accumulating something, is often mentioned in the literature in connection with mental disorders (Mathes, Timpano, Raines, & Schmidt, 2020). Typical scenarios for this are, for example, the prediction of heavy snowstorms or hurricane warnings. At that time worried customers buy large amounts of food or gasoline (Zheng et al., 2020). They fear a supply disruption due to the interruption of the normal production or distribution of products. Suppliers are not able to fill orders, and delivery delays increase. Customers buy less than they desire and respond often with seeking for larger safety stocks (hoarding) and they order more than they demand (phantom ordering) (Sterman & Dogan, 2015).

For a long time, a safety stock level was considered as rational behavior. In recent years, the economic and social situation in many countries has made it unnecessary. Thus, companies reduced their stocks in order to save costs. Sudden interruptions in supply, such as those that suddenly occurred during the COVID-19 pandemic, hit companies and their customers hard (Zheng et al., 2020). Notably, governments and administrative authorities in many countries, e.g., in Germany and the UK, recommended the maintenance of safety stocks for non-perishable food and hygiene products for coping with the crises.

Scarcity is a real or perceived threat to the customers' ability to meet his or her needs and desires. It results from a lack of goods, services or resources or a lack of access to them (Hamilton et al., 2019). Product scarcity results either in the short-term (e.g., stock outs) or in the long-term (e.g., because of legal restrictions). Variety scarcity refers to limited quantity of a specific brand in contrast to category scarcity, which refers to a lack of access to an entire product category (Hamilton et al., 2019). In contrast, resource scarcity is the real or perceived lack of various forms of capital (i.e., financial, social and cultural).

Buying as Emotional Self-Regulation

Initiation, intensification or changes in consumption habits are often reactions to stress (Mathur, Moschis, & Lee, 2003). Chen, Lee, and Yap (2016) found that a loss of control, leads customers to restore control through product acquisition. Especially, when they lose the control over their environment, customers buy utilitarian products to reinstate their sense of control.

This is often impulsive when the customer feels a sudden, often strong and persistent urge to buy something unconditionally. The consequences associated with the purchase are often ignored (Darrat et al., 2016, p. 104). Various studies have investigated this hedonic consumption with its mood-alleviation processes and self-gratification aspects of shopping (Arnold & Reynolds, 2012).

People often shop when they feel sad to reduce their sadness (Raghunathan, Pham, & Corfman, 2006; Rick, Pereira, & Burson, 2014). If and how the mechanism work is not clear yet. Rick et al. (2014) formulate the following features of *retail therapy* (i) improved mood when buying ordinary items, (ii) desire for sudden purchases (unplanned purchases), (iii) increased guilt after unnecessary purchases, (iv) passion for spending money, (v) habit of constantly borrowing money.

Those using retail therapy are shopping for experiencing pleasure, not necessarily because of the product. Sadness raises reports of helplessness due to the situation of inducing emotions, the effect between sadness and consumption is mediated by helplessness. Also, inducing a sense of control, through choice, mitigates the effect of sadness (Garg & Lerner, 2013).

Rick et al. (2014) state shopping as a potentially effective way to minimize sadness that lingers (residual sadness) following a sadness-inducing event. Atalay and Meloy (2011) found in a diary study, that most participants reported positive feelings thinking on their most recent purchase which was motivated to reduce sadness. Further, the participants showed an increased willingness to spend (Cryder, Lerner, Gross, & Dahl, 2008).

Uncertain circumstances due to the disease triggered panic buying and is further enhanced due by public panic which causes additional worry about limited food supplies, and thus demand increased (Idris, 2020). The food sector faces an increased demand due to panic-buying and stockpiling of food products during the COVID-19 crisis (Nicola et al., 2020). Panic results in egoism such as panic buying, capitalist behavior, xenophobia and believing in every news item seen in social media (Nicomedes & Avila, 2020). However, the behavior in the situation of panic buying is often influenced by social-peers. If customers observe that the panic intensity among their peers is higher than a threshold, they increase their panic buying demand. Customers often feel pressure for stockpiling due to the long queues in front of the markets and buying news in the media and internet (Zheng et al., 2020).

The previous research to explain panic buying and safety stocks only considers buying behavior as a reaction to panic and uncertainty. The effect that increased shopping has on emotions is not considered in these observations. It seems the importance of *panic buying* and the creation of *safety stocks* as emotional self-regulation is not so obvious at first glance.

Method

Due to the approach following the Grounded Theory, interviews are the appropriate research instrument. Questions are designed to extract knowledge about changes in (grocery and online) buying behavior during the first shut down during the COVID-19 pandemic. Qualitative interviews opens new scholarly avenues of testable support for buying behavior in crisis beyond the quantitative literature, and can be a strong methodological fit to understanding business–society interactions and specifications during the Corona pandemics (Bapuji et al., 2020).

Data gathering and evaluation

In semi-structured telephone interviews from 06.-16.04.2020, eight Brazilians were interviewed. Table 1 provides an overview of the participants. The participants were evenly distributed across the age groups. They came from different regions of the country and lived in different situations, from students to pensioners. The respondents are anonymous in order to protect their identity.

Table 1: Characteristics Interviewed Persons

| Interview | Sex | Age | Region | Profession |
|-----------|--------|-------|-------------------|--------------|
| 1 | Female | 30-44 | Tocantins | Lawyer |
| 2 | Female | 45-60 | Rio Grande do Sul | Teacher |
| 3 | Female | 60-70 | Pernambuco | Pension |
| 4 | Female | >70 | Rio Grande do Sul | Pension |
| 5 | Male | 20-30 | Goiás | Working |
| 6 | Male | 20-30 | Goiás | Working |
| 7 | Male | 30-44 | Goiás | Entrepreneur |
| 8 | Male | 45-60 | Rio Grande do Sul | Teacher |

This sample represents a heterogeneous group of customers for the investigation, contrasted in the relevant characteristics and, thus, not representative but informative. Participants provided information about their food purchases and online shopping and provided information about the extent to which their routine has been changed by the COVID-19 pandemic. They also reported on their impressions and feelings about the precautions taken in the shops and gave an assessment of their own risk of infection. Quotes were selected to present a concrete consumer behavior. While generalizability is a concern for this type of research (Lewis, McNaughton Nicholls, & Ormston, 2014) it provides a vivid opportunity to explain the behavior in complex situations. The authors conducted the interviews in Portuguese.

Findings

The majority, 7 of the 8 respondents, changed their shopping habits due to the COVID-19 pandemic. The frequency of purchases changed, but also the size and location were considered when selecting the shops now visited. The only participant who reported that his behavior had not changed followed the pattern of shopping immediately after receiving his salary, which is why he said that he had not changed his routine. For this type of customers their economic framing does not allow the implementation of a sophisticated shopping routine meeting the new challenges arising from the COVID-19 pandemic. The others stated that they had no fixed shopping routine. They shopped when they needed to, but they did not plan their shopping differently than before the pandemic.

Now, since the arrival of the coronavirus in Brazil, changes in the frequency of shopping and changes in the places where people shop have become more noticeable.

“Since the pandemic crisis, I only go out once every fortnight. Before the crisis, I went out every week.” (Interview 3)

Regarding the location, three participants reported that they have chosen to shop in less busy places, to minimize the risk of contamination.

“Yes, I have been to markets near my home before. The reason for this is precisely the proximity of the house and also that it has a greater variety of products.” (Interview 2)

Interview participants report that their priority is now on fast shopping. They buy the things they plan to buy without looking for changes and without reading more information on the labels.

“Yes, I feel obliged to make more responsible purchases. So, I think the question of the list is important, a very big reflection of what you really need. [...] Also the question of not leaving to buy only when you need something, of making a shopping list. Come out with the right list, that's it.” (Interview 2)

The closure of restaurants influenced the routine of customers in Brazil substantially. One of the participants reported, “my regular shopping behavior was every week to go to the supermarket on Sunday and have lunch at the mall”. Another reinforces that “I used to go out to the restaurant a lot, to have a snack outside. Obviously, that opportunity doesn't exist now.” (Interview 7).

In Brazil, eating in restaurants is common. The habit of eating out is very common in various social classes. Four participants reported that they only began to eat at home every day after restaurants and bakeries closed. Therefore, the amount of food they buy to prepare meals has increased considerably. Especially products with a longer shelf life are now in demand. One of the participants quantified this change based on the number of meals: “Seven days a week, 14 large meals a week, lunch and dinner. I would say that I did it before the pandemic, around 4 from 14, at home. Now I'm doing 13 at home.” (Interview 7).

The interview partners did not report the absence of products in groceries. The only product not found by two participants were masks. Even so, there have been reports of concern, in case people do not buy responsibly. One participant state that he expects responsible behavior from customers: “I hope everyone does. Otherwise, it will be chaos. It will be barbarism.” (Interview 2).

Only one of the survey participants explicitly stated that she was stocking products. The others who said they were just buying in larger quantities to avoid going shopping more often, and that it was not a matter of making stock since the products were all consumed until the time of the next purchases. This frequent statement becomes evident in the statement: “Sometimes, we buy a little bit, but not that we are stocking. Everything we buy, we use, nothing is left unused. We don't do superfluous purchases”. (Interview 2)

It was unanimous among the participants that there was no increase in online purchases. One reported that she has requested delivery of organic food that she does not find in the market she is going to. Another reported that he was ordering quick meals to be delivered at home, but that it was only in the first few days, but later he reduced it for fear of contamination of the products he was receiving.

Three respondents reported that they made purchases in order to improve their mood, in search of pleasure in the purchase they made. One said, “yes, I bought chocolates. Not now at Easter, but I bought it. Whenever I go out, I buy chocolate, cookies, and other junk, that kind of candy. It seems to improve my mood”. Another report was in the same sense “I'm buying some things, but I don't know if it's chic, but for pleasure. Maybe things I might not buy if it weren't for quarantine. A different cheese, a different chocolate. I'm buying it to, I don't know, reduce stress.” (Interview 7). Another participant reported that he and his husband did not actually buy a product, but made a trip to feel freer, stating, “we went to be able to see the world a little bit, outside here, outside the walls, because we see the world through walls and windows here. We listen through the TV that talks all the time and only about the virus and disease.” (Interview 8).

Some participants reported that they only changed the products they are consuming due to the high prices of some products. In Brazil, respondents reported a rise in prices for some products,

such as eggs and milk. In contrast, one participant says she expects product prices to even drop “it went up at the beginning of this crisis, but the tendency is to stay the same or even go down, since people are broke, losing jobs. So, I think that in this relationship, the sellers, the producers, will have to go down in order to have consumption and increase demand.” (Interview 3).

Participants’ responses about the impact that the restrictions caused by the pandemic had on their financial budgets were divided. One of the participants reported having withdrawn a loan to prepare for a possible economic crisis.

Another participant confirms that there is more money available in the personal budget. She says that the extra money will be used to help people who are experiencing difficulties: “There is more money left, because as we do not spend much, right. What I have been trying to do is, for example, help with shopping for basic food baskets. So, I have money left over, so I’m going to buy basic baskets to help those who are experiencing difficulties.” (Interview 4).

The experience of going shopping brought new feelings to the respondents. One respondent reports the suspicion generated; “Everyone is suspect, right (laughs). And I’m afraid of everyone and everyone is afraid of me” (Interview 1). Another participant reports on the feeling of strangeness that the use of the mask creates in her: “from the beginning I have been wearing a mask. Going out with the mask, it seems that people move further away or become angrier, I don’t know.” (Interview 2). Another participant summarizes the strange feeling, stating that the shopping experience does not seem like something real, “The situation is kind of surreal, people in masks, people looking at you scared. It looks like you’re living in an end of times science fiction movie.” (Interview 8).

One of the participants reports the lack of care she found when going to a consultation with her gynecologist “I went to have a prenatal consultation, neither the doctor was wearing a mask, nor his secretary was wearing it” (Interview 1). In Brazil, despite the presence of the virus in almost the entire territory, many commercial establishments have not adopted precautions “at the beginning even started with precautions but then after a while they have returned to normality” (Interview 2).

If one systematizes the interviews, it becomes apparent that the customers often change the number of purchases in a first reaction and buy less impulsively. This means they write in the checklist and consider which articles are really needed. Figure 1 summarizes the findings of the interviews. The preferences for brands will not change for the time being. Only if they are not available or prices rise too much, customers will change brands. The situation is different with shops. If they are too crowded or there is no sense of security at all, customers switch to smaller, less frequented shops. Generally, the interviewees tend to expect prices to rise.



Figure 1: Changes in the buying behavior during the COVID-19 pandemic

Both retail therapy and stockpiling have an emotional calming effect. Both calming strategies were cited and used by the interviewees. People with a lower perceived risk use retail therapy, while people with a higher perceived risk use stockpiling more often.

Conclusion and Implications for Retailers and Research

Our grounded theory research aims to provide findings of buying behavior and the perceived risk during extreme situations such as the COVID-19 pandemic.

Our study explores how and to what extent (i) perceived risk influences Brazilians emotional self-regulation, (ii) perceived risk of Brazilians influences scarcity and (iii) how and to what extent precaution acceptance influences the perceived risk.

Consumer behavior has long been an area of interest for managers. During the COVID-19 pandemic many things have changed. Going beyond the changes in product category choice, the in store experiences is characterized by fears and concerns on both sides, sales staff and customers rather than fun, entertainment and excitement (Roggeveen & Sethuraman, 2020). It is therefore important to identify the mechanisms working in the background to encourage customers to purchase in local stores rather than online.

First, it is important to understand that there are different types of customers who react in different ways to the changed conditions. People who perceive a very high risk initially have a greater tendency to panic buying. Media reporting further reinforce this tendency and the behavior of peers, so that further panic buying increases. Even if panic buying initially has a certain positive effect on the sales figures of local stores, this is only short-term and not sustainable. However, if the perceived risk becomes too much, people withdraw and make their purchases in supposedly safe places, i.e. less frequented shops or even online. This is where local shops benefit from use of precautions. They can give customers a sense of security through distance rules, disinfectant dispensers, Plexiglas panels and a limit on the number of people in the store, so that the critical mark of perceived risk is not exceeded.

People with a very low or medium perceived risk can further reduce their perceived risk through the precautions, so that this has a positive effect on local business. Notably, the frequency of purchases increases again when the perceived risk is low, so that spontaneous, impulsive purchases continue to be made and no attempt is made to achieve security through increased

planning. Therefore, it is crucial, to create a positive store atmosphere with a smart use and implementation of precautions. They must be visible in order to develop their effect, but on the other hand, they must not be annoying and thus deterrent. Here, the right measures must be found according to local conditions. It is advisable to deal proactively with increased demand caused by hoarding and panic buying in order to avoid the associated negative effects on business. At best, this can be achieved by adjusting the planning of orders and shelf stocking so that the consumer is as little aware as possible of the changes. A limitation of the quantities sold can also be used, but it indicates certain supply difficulties for the customer in his usual shopping and has a negative effect on the perceived risk. Among the clear winners of the COVID-19 pandemic are online shops. Online stores benefit both from the natural low risk of infection during online purchases and from the scarcity of some products in local stores. They also benefit from the increased demand for self-calming purchases and retail therapy. In the supply chain, the changed demand should be adapted so that there is no shortage and later oversupply.

Implications for further research can also be derived from the study. Taking into account the interactions of perceived risk and buying behavior helps to explain findings on buying behavior in extreme situations (such as the COVID-19 pandemic). In addition, the involvement of other countries is recommended, as different governments and countries use different strategies to combat the pandemic. This has a significant impact on the perception of the risks. The countries are also in different phases of the pandemic. While people in Germany are enjoying various easing measures, other countries are imposing stricter measures due to rising infection rates. Taking the behavior in different stages into account in research, helps to draw correct conclusions.

This finding is also relevant for retailers, as the perceived risk flattens out as the number of infections decreases and people start shopping again (frequency and also spontaneous quick shopping).

For people who are particularly at risk or anxious, for example, a shopping service could be set up to further minimize the risk of infection. In this case, additional goods would have to be advertised in the conversation, since the in-store presentation of goods and the ambience eliminate the take-away effects.

For the other types of shoppers, the ambience should be as pleasant as possible, so that a feeling of security is conveyed and customers can shop with ease. In this way, more intensive quick-shopping takes place and customers demand spontaneously more articles than with higher levels of anxiety.

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