

Is My Grocery Safe? Effect of Perceived Service Safety on Safety Satisfaction and Overall Customer Satisfaction

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Abstract

In the wake of the current pandemic, safety has become a key concern for customers, and they are evaluating the safety measures taken by the retailer. There is an urgent need for the safety measures taken by the retailers in terms of product safety, safety from infection, customers' safety while maintaining customers' financial, privacy, and environmental safety. In our study, we view safety along the lines of Maslow's need for safety and define it as a subjective psychological state characterized by the feeling of being protected from what causes hurt, injury, or loss. Moreover, we assume that perceived safety can be conceptualized in terms of a set of subdomains and establish that customers' satisfaction with the safety measures taken by the retailer influence customers' satisfaction with the retailer. Safety as a construct in customer satisfaction assessments is missing from the existing services and retailing literature. Hence our study is among the first in services and retailing literature to introduce perceived service safety and safety satisfaction and its effect on overall customer satisfaction.

Keywords: Perceived Service Safety, Safety Satisfaction, Customer Satisfaction

Track: Retailing and Omni-Chanel Management

1. Introduction

During the 2020 covid-19 pandemic, it became clear that retailing and other service environments can be viewed as highly unsafe places (Berry et al., 2020). Consequently, stores in many countries were ordered to close, and various restrictions (such as wearing a face mask and social distancing) were imposed on employees and customers. This thus mirrors a concern with one particular safety domain, namely preventing further spread of a potentially fatal disease. However, the offer of a vendor can be perceived as more or less safe in terms of several domains. To date, marketing-related research (during non-pandemic times) has been dominated by a focus on product safety, particularly food safety, but much research has also examined safety with respect to privacy issues and payments in online settings. In any event, previous research indicates the existence of several domains related to the consumer's safety when he or she is engaged in buying from retailers. So far, however, there have been few attempts to examine several domains of this type within the frame of the same conceptual framework and within the same empirical study.

In the current study, we view safety along the lines of Maslow's hierarchy of basic need (Maslow and Lewis, 1987), and we define it as a subjective psychological state characterized by the feeling of being protected from what causes hurt, injury, or loss. Moreover, we assume that perceived safety can be conceptualized in terms of a set of subdomains as well as an overall, global construct in the same way as, for example, perceived service quality (e.g., Zeithmal, Berry and Parasuraman, 1985). The purpose of the current study is to apply this view of (customer-perceived) safety on online grocery retailing. This sector was chosen since its share of total grocery sales increased significantly during the 2020 covid-19 pandemic (Brion 2020), presumably because consumers consider online purchases to be a more safe option than offline purchases from the point of view of reducing the potential for getting infected by a disease. If this was the case, however, it has hitherto not been examined empirically. More specifically, and for consumers who purchase groceries online, the purpose of the current study is to examine to what extent perceptions of safety measures taken by retailer contribute to customers' satisfaction with perceived service safety— and if perceptions of safety along such lines influence overall customer satisfaction and hence customers' intention to repurchase. Many attempts already exist when it comes to building theories of antecedents of online retailer satisfaction (e.g., Hult et al.,

2019), and the ultimate aim of the current study is to address if customers' safety-related perceptions need to be integrated into existing theories to improve their capacity to explain and predict customer satisfaction.

By introducing perceived service safety as a key determinant of customer satisfaction, we make three contributions to the services and retailing literature. First, our study is among the first in service and retailing to introduce perceived service safety. Second, we introduce employees' service safety behavior as a key component of perceived service safety. Third, we also introduce service satisfaction as customers' satisfaction with the safety measures taken by the retailer, which we establish as a concept different from overall customer satisfaction with the retailer. Further, our study not only extends the theoretical insights into the impact of safety measures taken by the retailer on customers' perceived service safety and hence on safety satisfaction but also offers actionable implications for the retailers.

2. Conceptual background

2.1 Perceived Service Safety

The concept of service quality has dominated the service literature (e.g., Cronin and Tylor, 1992) and it represents a concept that is centered around the topic of customers disconfirmation of expectations, making perception of service quality a priority for the customers. Safety researchers such as Zohar (1980) have elaborated on the service quality definition by bringing in the importance of service climate, stressing the need for creating a climate for service, which serves as a foundation for employees to deliver excellent services during service encounters. Zohar (1980), one of the early researchers on the organization's service climate, incorporated service safety measures as a key component of service climate, positing that service providers' commitment towards safety "is a major factor for effective success" of the organization (p.101). Safety measures taken by service providers capture their commitment towards the physical well-being of their customers (Katz-Navon, Naveh, and Stern, 2005). Customers perceived service safety, therefore, can be defined as the customers' attitude or judgment relating to the service safety measures taken by the service provider.

Safety-related measures taken by the service providers include the availability of resources to provide customer safety, ensuring customers safety is a key priority, communicating about safety (Zohar 1980), such as providing safe grocery delivery to its customers, solving safety-related

issues, providing safety to its customers, communicating how it is improving safety for its customers, emphasizing on safety procedures in its communications, being strict about safety of its customers and making sure that its grocery delivery employees wear protective gears like masks and gloves.

Although the existing literature has provided a broad definition of service safety, in these forms, safety climate is linked to work environment characteristics (e.g., Neal and Griffin, 2006) and safety-related steps taken by the organization (e.g., Zohar, 1980), determinant of perceived service safety in the context of retailing is less known. With this starting point, we first set out to examine the determinants of perceived service safety in the context of online grocery with specific reference to safety-related steps taken by the retailer in terms of product safety, privacy safety, financial safety, environmental safety, infection safety, customer's personal safety and also employee's safety behavior.

2.1.1 Retailer Safety Measures and Perceived Service Safety

Extant literature on online grocery (e.g., Mortimer et al., 2016) has indicated that perceived risks which customers are concerned with shopping for groceries online, such as risk with sharing personal information privacy risk, risk of transaction or financial risk and risk of product quality. Customers today are not only concerned with the safety from infection but also with environmental safety (Berry et al., 2020). Providing product safety, privacy safety, financial safety, personal safety, safety from infection, and environmental safety are the safety measures that retailers can take, impacting the perception of the organization's safety climate.

Safety measures taken by the retailer can be seen as the retailer's manifestations of values and beliefs about providing safe services to the customers. Diaz and Diaz-Cabrera (1997) postulated that safety-related measures taken by an organization, which they stated as an organization's policies towards safety, are predictors of safety measures taken by the service provider. These safety measures, therefore, indicate the importance retailer ascribe to the customers' safety and also show the retailer's effort towards facilitating safe services to the customers. Hence, we hypothesize the following:

H1a: Safety measures are taken by the retailer, such as providing product safety, privacy safety, financial safety, personal safety, infection safety, and environmental safety, will positively influence perceived service safety.

2.1.2 Employee safety behavior and Perceived Service Safety

Extant literature on safety has shown that employee safety behavior is a strong indication of service providers' commitment towards providing safe services to the customers (Neal and Griffin, 2006). Safety behavior, as defined by Burke et al. (2002), is a set of "actions or behaviors that individuals exhibit" that can promote the safety of its customers (p.432). Safety behavior is conceptualized in different ways in the safety literature. Still, at the core, it comprises employees task-driven safety behavior (Burke et al., 2002) that include the key safety activities that employees carry out to maintain customers safety, which Neal and Griffin (2006) labelled as "adhering to standard work procedures" (p.947). In the online grocery context, employees' safety behavior towards the customers, such as wearing gloves, masks, cleaning the grocery delivery carts or high-contact areas and maintaining social distancing (Berry et al., 2020), therefore is a reflection of how safety is being operationalized by the retailer.

Berry et al. (2020) stressed the need for service adaptation and transformation to make safety an essential element of service operations and marketing; we feel that the role of employees' safety behavior also calls for equal attention. As Berry et al. (2020) stated that COVID-19 "has changed the landscape for service organizations" (p.5), the impact of employee's safety behavior on perceived service safety is becoming equally important, which signals to customers that customers safety is the priority for the retailer. However, no research to date has examined the role of online grocery employees' safety behavior as an antecedent of the retailer's perceived service safety. We therefore hypothesize:

H1b: Online grocery employee's safety behavior will influence will positively influence perceived service safety.

2.2 Perceived Service Safety and Safety Satisfaction

In the COVID-19 time, making people feel safe has become a key priority for the service provider, which is becoming challenging for organizations, especially in "contact-dependent services" (Berry et al., 2020, p.2) such as online grocery. Berry et al. (2020) defined the term "service adaptation as what the firm does to improve safety" (p.2). Analogous to safety climate, the service adaptation involves creating a safety climate within the service organization, such as requiring face masks, sanitizing high-contact areas, etc.

Over the past two decades, a large body of literature has covered the safety measures taken by service providers (Zohar, 1980; Neal and Griffin, 2006). However, the relationship between perceived service safety and customer satisfaction with the safety measures, henceforth termed as safety satisfaction, has not been examined. Analogous to frequently used disconfirmation of expectation paradigm (Oliver, 1980), safety satisfaction can be viewed as customers' response to their evaluation of discrepancy between their expectations and perception of safety provided by the retailer and the actual safety service provided by the retailer. Therefore, customers' attitude or judgement of the safety measures taken by the retailer will result in either confirmation or disconfirmation of the safety provided by the retailer.

Linking safety satisfaction with the safety measures taken by organization, Schneider et al. (1998) posited that safety measures taken by an organization is founded on identifying customers' needs and expectations from the quality of service received. Although not much attention has been paid to safety measures taken by the service provider in the service literature, we feel that to provide safe service encounters calls for a need to examine perceived service safety as a determinant of safety satisfaction. Perceived service safety compares the ideal and perception of safety-related measures, while safety satisfaction is a function of disconfirmation of predictive service safety expectations. Further, perceived service safety is proposed to be an antecedent of safety satisfaction.

H2: Perceived service safety will influence safety satisfaction.

2.3 Effect of safety-satisfaction on overall customer satisfaction

Bitner and Hubber (1994) defined overall customer satisfaction as the customer's overall dis/satisfaction with the organization based on all the encounters and experiences with that particular organization (p.77). As posited by extant literature on customer satisfaction (c.f. Oliver, 1980), overall customer satisfaction is based on customers' previous experiences with the retailer or the service provider. Customer satisfaction, therefore, can be summarized as the function of customers' all previous transaction-related satisfaction.

In the current context, customers overall satisfaction is assumed to be a function of satisfaction customers had with the safety provided by the retailer. Thus, customers form an aggregation of their evaluations of the safety measures taken by the retailer. Subsequently, this aggregation of their safety satisfaction forms previous grocery shopping experiences will influence the overall

customer satisfaction. Safety satisfaction at the transaction-specific level and its effect on overall customer satisfaction, thus far, is lacking in the existing literature. We, therefore, hypothesize that customers' safety satisfaction, will influence their overall satisfaction with the retailer.

Putting together:

H3: Safety satisfaction will positively influence on overall customer satisfaction with the retailer.

3. Method

A sample of online grocery shoppers' sample (n=250) was collected via Amazon Mturk. These online grocery shoppers were asked questions pertaining to the safety measures taken by their grocery retailer towards the measurement of perceived service safety, product safety, privacy safety, financial safety, personal safety, environmental safety, infection safety, employee safety behavior and customers satisfaction with the perceived service safety. The scales were adapted from existing safety research (e, g, Neal and Griffin, 2006) and modified to fit the current context. Measurement scale for overall satisfaction was measured using the Fornell satisfaction barometers (1992). Scales ranged from 1-7 were used for all items.

4. Result and Analysis

Scale reliability and exploratory factor analysis were conducted to examine the performance of the scales. All the items had reliability $\alpha > 0.80$. We performed PLS-SEM using SmartPLS to analyze our structural model (Figure 1). PLS-SEM has been used in prior online retailing research (e.g., Singh and Söderlund, 2020) for analyzing the structural and measurement model and also for testing and validating hypotheses. Constructs in the measurement model had factor loading > 0.7 , and composite reliability of the constructs ranged from 0.84-0.95; convergent validity of the constructs was also within the acceptable limit, ranging from 0.63-0.77. All constructs also indicated discriminant validity, which was measured using the Fornell-Larcker criteria (Fornell and Larcker, 1981).

Hypothesized relationship and the path coefficient was examined following bootstrapping (5000) of the sample (Table 1). Results indicated that financial safety and personal safety didn't have significant effects on perceived service safety. All the safety constructs accounted for a 78% variance in the perceived service safety, which further resulted in a 44% variance in safety satisfaction. The results indicate that employee safety behavior significantly affects perceived

service safety (total effect= 0.465) compared to other safety constructs in our conceptual framework. Our analysis also showed that safety satisfaction accounted for 59% variance in overall customer satisfaction. (Figure 1).

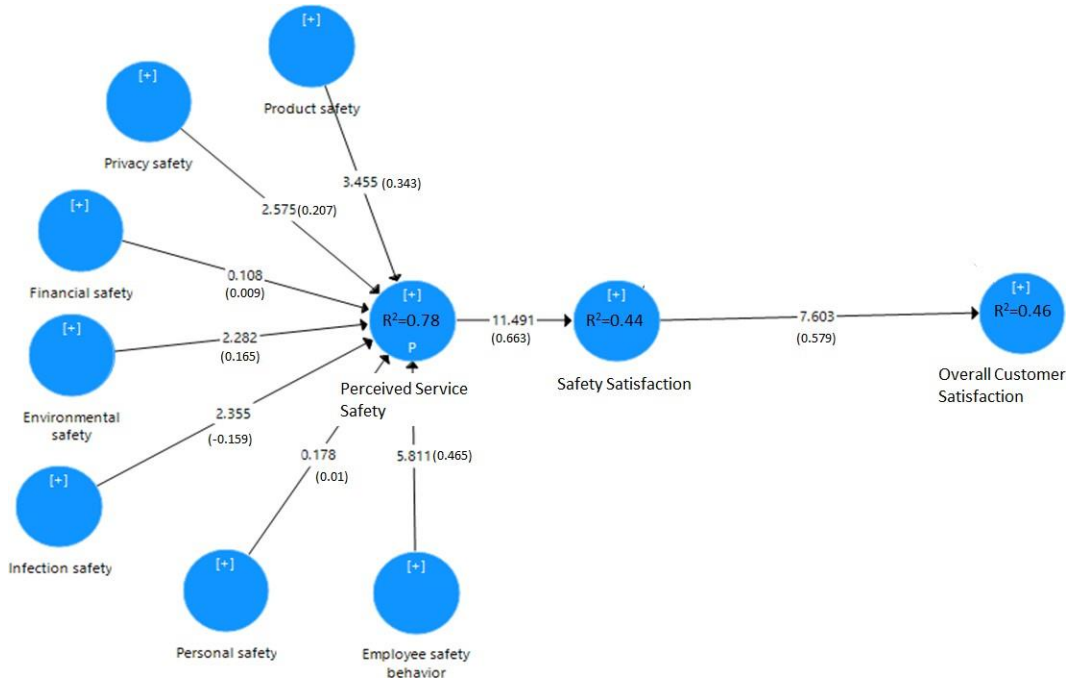


Figure 1: Effect of safety satisfaction on overall customer satisfaction and repurchase intention.

Table 1: Hypothesis and path coefficients

Hypothesized Path	Path-Coefficient	t-Statistics	p-Values
H1a: Environmental safety -> Perceived service safety	0.17	2.28	0.02
H1a: Financial safety -> Perceived service safety	0.01	0.11	0.91
H1a: Infection safety -> Perceived service safety	-0.16	2.36	0.02
H1a: Personal safety -> Perceived service safety	0.01	0.18	0.86
H1a: Privacy safety -> Perceived service safety	0.21	2.58	0.01
H1a: Product safety -> Perceived service safety	0.34	3.46	0.00
H1b: Employee safety behavior -> Perceived service safety	0.47	5.81	0.00
H2: Perceived service safety -> Safety Satisfaction	0.66	11.49	0.00
H3: Safety Satisfaction -> Overall Satisfaction	0.77	22.71	0.00

5. Discussion and Implications

In our empirical analysis, we provided a novel view on online grocery customer satisfaction where we examined the influence of safety measures taken by the retailer on safety satisfaction and eventually on overall customer satisfaction. In our framework, we examined various safety measures taken by the retailers that are important perceived service safety. In the wake of the current pandemic, safety has become a key priority for customers, which was evident from our results that indicated the effect of customers' satisfaction with retailer's safety measures, i.e., safety satisfaction on overall customer satisfaction with retailer in providing safe grocery. Safety is well documented in safety literature, which is often centered around employee safety. However, customers' perception of the safety provided by the retailer has not been addressed in the marketing or service literature. Our finding stresses customers' need for product safety, privacy safety, and safety of their environment. In addition, we also examined grocery employee's safety behavior as the antecedent of perceived service safety, which has not been taken into consideration in extant service literature. In line with the findings from the safety literature that has stressed the pivotal role of employee safety behavior on customers' perception of safety measures taken by service providers, we also demonstrated that employee safety behavior has the highest effect on perceived service safety. In the context of online grocery delivery, employees' safety behavior reflects service providers' safety measures and hence is pivotal towards perceived service safety and safety satisfaction. Our findings therefore indicate that retailers need to put more emphasis on training their employees so they can demonstrate safety behavior reflecting the safety measures taken by the retailer. Taking safety related measures, which we established as antecedents of customers perceived service safety, can reward retailers with higher overall customer satisfaction, which has been shown in previous studies to influence customer behavior, the retailer's costs and revenues and, ultimately, retailer profitability.

References

- Berry, L. L., Danaher, T. S., Aksoy, L., & Keiningham, T. L. (2020). Service safety in the pandemic age. *Journal of Service Research, 23*(4), 391-395
- Bitner, M. J., & Hubbert, A. R. (1994). Encounter satisfaction versus overall satisfaction versus quality. *Service quality: New directions in theory and practice, 34*(2), 72-94.
- Biron, A. (April 12, 2020). *Rampant shipping delays and limited stock amid the coronavirus outbreak reveal why e-commerce hasn't defeated physical stores just yet*. Retrieved from

<https://www.businessinsider.com/online-order-delays-during-coronavirus-e-commerce-limits-2020> (Last accessed November 17, 2020)

Burke, M. J., Sarpy, S. A., Tesluk, P. E., & Smith-Crowe, K. (2002). General safety performance: A test of a grounded theoretical model. *Personnel Psychology*, *55*(2), 429- 457.

Cronin Jr, J. J., & Taylor, S. A. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing*, *56*(3), 55-68.

Díaz, R. I., & Cabrera, D. D. (1997). Safety climate and attitude as evaluation measures of organizational safety. *Accident Analysis & Prevention*, *29*(5), 643-650.

Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *Journal of marketing*, *56*(1), 6-21.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39-50.

Hult, G. T. M., Sharma, P. N., Morgeson III, F. V., & Zhang, Y. (2019). Antecedents and consequences of customer satisfaction: do they differ across online and offline purchases? *Journal of Retailing*, *95*(1), 10-23.

Katz-Navon, T. A. L., Naveh, E., & Stern, Z. (2005). Safety climate in health care organizations: A multidimensional approach. *Academy of Management Journal*, *48*(6), 1075-1089.

Maslow, A., & Lewis, K. J. (1987). Maslow's hierarchy of needs. *Salenger Incorporated*, *14*

Mortimer, G., Fazal e Hasan, S., Andrews, L., & Martin, J. (2016). Online grocery shopping: the impact of shopping frequency on perceived risk. *The International Review of Retail, Distribution and Consumer Research*, *26*(2), 202-223.

Neal, A., & Griffin, M. A. (2006). A study of the lagged relationships among safety climate, safety motivation, safety behavior, and accidents at the individual and group levels. *Journal of applied psychology*, *91*(4), 946-953

Singh, R., & Söderlund, M. (2020). Extending the experience construct: an examination of online grocery shopping. *European Journal of Marketing*, *54*(10), 2419-2446

Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, *17*(4), 460-469.

Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1985). Problems and strategies in services marketing. *Journal of Marketing*, *49*(2), 33-46.

Zohar, D. (1980). Safety climate in industrial organizations: theoretical and applied implications. *Journal of Applied Psychology*, *65*(1), 96-102