

Influence of COVID-19 on the Retail Experience

Subjects: **Operations Research & Management Science**

Contributor: Beatriz Moschetta Cunha , Carolina Kato Lettieri , Giulia Wiltenburg Cadena , Veridiana Rotondaro Pereira

E-commerce's convenience, speed, and ability to overcome geographical barriers have made it increasingly popular across industries.

e-commerce market

customer satisfaction

COVID-19 pandemic

1. Consumer Behavior

According to Lovelock and Wirtz ^[1], service is an act or performance offered by one party to another, describing its intangibility and simultaneous consumption. As services are consumed as they are produced and are tied to a company's competitiveness, they must be delivered with quality and geared to consumer behavior ^{[2][3]}.

Thus, consumer behavior is defined as the study of how individuals select, purchase, and discard goods and services to satisfy their needs and desires ^[4], influenced by cultural, social, and personal factors, which can also be divided into internal and external variables that affect the consumer ^[5].

External variables are defined as situational and environmental (weather variables and the time of year), social and cultural (set of values and customs), and reference groups (professional groups, family, and friends) ^[6]. Internal variables are classified as gender, age, personality, self-image, and lifestyles and are fundamental to the perception of consumers' personal decisions ^[6].

The increased participation of service companies in the economy throughout the 1980s lead to the realization of the link between product and service quality and customer satisfaction and company profitability ^[7]. Consequently, organizations begin to strive for excellence in the quality of their services and products, considered fundamental to conquer and maintain the market ^[8]. Thus, the quality in services is based on the difference between customers' expectation of the service to be provided and their perception of how it is provided ^{[9][10]}. This makes it a priority to identify the various criteria that define the quality of a particular service, i.e., those that meet customers' needs and expectations ^[2].

2. E-Commerce

In the last decade, the Brazilian consumer market has embraced e-commerce as the main driving force, which encompasses different categories, among them electronic retail. Turban and King ^[11] understand electronic retailing as retail transactions between companies and final individual buyers through computer networks or the internet, where the latter can purchase and/or complete the transaction through an electronic system. Retailing is understood as any economic activity of selling a good or a service to the final consumer ^[12].

According to the executive director of the Buy & Trust Movement, the increase in e-commerce in Brazil can be attributed to a shift in the behavior of Brazilian consumers. They have become more actively involved in remote purchasing and have shown a significant preference for consuming products that fulfill their daily essential needs ^[13].

3. COVID-19 Implications

In December 2019, the world began to face a major health crisis with the new corona virus (SARS-CoV-2), called COVID-19, which emerged in China and spread rapidly. Its rapid and exponential growth led the World Health Organization (WHO) to declare a global pandemic on 11 March 2020. Brazil was the first country in Latin America to present a case of COVID-19, on 25 February 2020 ^[14].

To contain the advance of the contamination, many countries adopted measures that included encouraging hygiene and the use of masks, social distancing, closing establishments, prohibiting large events and gatherings, restricting travel, and making the population aware of the need to stay home ^[14].

Due to the pandemic, the lives of people and companies in all sectors have undergone many changes. These include restrictions on the movement of consumers, workers, and consumer goods, impacting logistics, routine activities, and interpersonal interactions ^{[15][16]}. From this, changes in habits and behavior patterns that were in motion greatly accelerated. The dynamics of digitizing business and intensifying the use of digital channels are examples ^{[16][17]}. E-commerce has become an ally for businesses, who now have another option to sell products and services. Some of the key points that had a significant impact include:

Explosive increase in demand—A survey conducted by EY Parthenon and published by VEJA INSIGHTS in 2020 found that with the retail shutdown, 62% of Brazilians visited fewer physical stores and 32% increased online shopping for food, which had been one of the segments with little e-commerce participation. The survey also found that, among the respondents, 74% of them intended to do more online shopping. Finally, order deliverability gained importance for 68% of consumers, as has product availability ^[16].

Finally, according to the Brazilian Association of Electronic Commerce (AbComm) ^[13], online supermarket purchases registered an increase of 180% since March 2020. According to data in a report by Ebit|Nielsen ^[18], the number of new consumers in supermarket e-commerce practically doubled after the beginning of the quarantine, even though this sector was considered essential and was not required to close its doors during the pandemic.

Change in consumer preferences—Customers had to quickly adapt to new forms of online purchasing, with many experiencing them for the first time. Furthermore, the safety and reliability of delivery services and the availability of online payment options became key factors in customers' choices ^{[19][20]}.

Logistical challenges—The sudden increase in demand overwhelmed supply chains and delivery services. Logistics companies had to handle a much higher volume of orders, leading to delivery delays and operational difficulties ^[21]. Additionally, additional safety and hygiene measures were required at distribution centers and in delivery processes, impacting the efficiency and speed of operations ^[22].

Need for rapid adoption of digital solutions—A remarkable and pervasive trend that cuts across various domains is the rapid pace of technological change and digitalization. With the advent of the Internet and mobile technologies, we are observing profound transformations that extend to all sectors and aspects of human life ^[23]. Certainly, the advent of online retail platforms or applications (apps) has propelled the retail sector into a new era. Enabled by communication technologies, customers now have access to products at highly competitive prices, while retailers benefit from reduced operating costs.

Online platforms play a crucial role in enabling retailers to minimize operating costs and enhance overall business efficiency ^[23]. By leveraging these platforms, retailers can streamline their operations, optimize resource allocation, and achieve cost savings ^[24]. The online environment offers opportunities for automation, streamlined processes, and increased productivity,

leading to improved efficiency and effectiveness in retail operations [25]. It is equally important to emphasize the usability aspects of the application (app) that significantly contribute to the user’s seamless experience in finding products effortlessly [23].

4. The Influence of COVID-19 on the E-Commerce Customer’s Retail Experience in the Supermarket Industry

After distributing the questionnaire, 136 responses were collected. Cases where respondents provided the same answers for all statements were identified and removed. This could be due to respondent inattention or lack of interest, rendering these responses unreliable. In such circumstances, the quality of the response is compromised, and it is not advisable to consider them for analysis [26]. Thus, these responses were removed from the survey, resulting in 133 valid responses.

The analysis started with an evaluation of specificity, represented by the “Uniqueness” measure, to validate the unexplained variance. Oblimin rotation was applied to all factors to determine if any questions exhibited a specificity above 0.5. Among the questions, 4, 13, 14, 18, 21, 23, 26, 27, 28, and 29 demonstrated a Uniqueness score higher than 0.5. Questions 13, 18, 21, 23, 27, and 28 were subsequently excluded from the analysis, while questions 14 and 26 were retained despite having a Uniqueness score of 0.505 and 0.501, respectively, due to their proximity to the cutoff threshold. Questions 4 and 29, related to COVID-19, were also retained since the COVID factor is essential for the research objective and cannot be eliminated. The factors in the final rotation are presented in **Table 1**, while **Table 2** presents the COVID-19 factor.

Table 1. Factors and Uniqueness.

	Component			
	1	2	3	Uniqueness
Q24	0.792			0.386
Q22	0.782			0.322
Q15	0.772			0.323
Q12	0.766			0.268
Q11	0.616			0.382
Q8	0.539	0.474		0.382
Q26	0.430			0.501
Q6		0.761		0.328
Q10		0.754		0.263
Q9		0.751		0.350
Q5		0.652		0.473
Q3		0.638		0.372
Q17			0.689	0.412
Q2			0.646	0.362
Q16			0.635	0.360

	1	2	Component 3	Uniqueness
Q14			0.535	0.505
	Component 1			Uniqueness
Q19		0.810		0.345
Q29		0.644		0.585
Q4		0.598		0.643

The present study identified three factors, along with a COVID-19 factor. Additionally, an extra factor was included to measure overall satisfaction, which encompasses customers' general satisfaction with the service and their perception of how they were treated by the company [3]. In total, the analysis considered five factors: the three identified factors, the COVID-19 factor, and the overall satisfaction factor. **Table 3** provides a comprehensive overview of these factors, including their corresponding questions and assigned names.

Table 3. Description of scale used in this study.

Factor	Name of the Factor	Question
1	Overall satisfaction	Q20. The services provided by the e-commerce marketplace are satisfactory.
		Q25. I am satisfied with the services provided by the e-commerce marketplace.
		Q30. The quality of service provided by the e-commerce marketplace meets my expectations.
2	COVID-19	Q4. The pandemic influenced my choice to shop with an application (app).
		Q19. I feel that I expose myself less to COVID.
		Q29. I plan to use shopping application (app) even with the end of the pandemic.
3	Delivery Logistics	Q3. Home delivery is a facilitator.
		Q5. The products are packaged appropriately.
		Q6. It was quick to order from the application (app).
		Q9. The selected products were within their expiration date.
		Q10. The purchase performance time is adequate.
4	Product Presentation on the Application (app)	Q22. It is easy to find the products in the application (app).
		Q26. The chosen products were delivered correctly.
		Q12. The application (app) provides items in an organized manner.
		Q15. It is easy to find information about the products.
		Q24. The application (app) has variety of product brands.

Factor	Name of the Factor	Question	
5	Delivery and Price	Q11. It is easy to interact with the application (app).	identifying ed on their
		Q14. The prices in the application (app) are the same as in the physical markets.	
		Q2. The delivery was done within the promised time.	
		Q7. The freight is a reasonable value. [3]	
		Q16. The selected products are in good condition.	
		Q17. The delivery is done quickly.	

Factor 3 was labeled as “Delivery Logistics” because it encompasses all the necessary steps and considerations involved in delivering products to customers’ doorsteps, including facilitation, packaging, ordering speed, product freshness, and timely delivery performance [15].

Factor 4 was named “Product Presentation on the Application (app)” as it encompasses the aspects related to the design, organization, and usability aspects of the application (app) that contribute to the user’s ability to find products easily [23], interact seamlessly, access relevant information, receive accurate deliveries, and explore a variety of product options.

Factor 5 “Delivery and Price” is related to several key aspects of the customers’ perceptions and evaluations regarding the pricing of products [27], the timeliness and quality of deliveries, and the overall value they receive in terms of product condition and delivery efficiency [15].

Next, Cronbach’s alpha analysis was performed to verify the reliability and measure the internal consistency of each factor, as Cronbach’s alpha is the average of the correlations between the items that are part of the factors (STREINER, 2003). The measure ranges from 0 to 1, with values of 0.6 and 0.7 being the minimum for acceptance (HAIR Jr. et al., 2009). All factors obtained an alpha greater than 0.6, except for the factor “COVID-19”, which will be kept, since it is the factor with the COVID-19 questions which is fundamental to the objective of the study (Table 4).

Table 4. Cronbach’s alpha per factor.

Factor	Cronbach’s Alpha
Overall Satisfaction	0.862
COVID-19	0.411
Delivery Logistics	0.844
Product Presentation on the Application (app)	0.872
Delivery and Price	0.742

Source: Compiled by the authors (2022).

References

1. Lovelock, C.; Wirtz, J. Services Marketing: People, Technology, Strategy, 7th ed.; Prentice Hall: Hoboken, NJ, USA, 2011; Volume 18.

2. Oliveira, A.P.d.; Santos, G.H.M.d.; Quintão, A.d.Á.; Ferreira, M.S.Â.; Oliveira, M.F.d. Análise da satisfação dos serviços prestados por um supermercado varejista com base nas dimensões da qualidade. LIBERTAS Rev. De Ciênciais Sociais Apl. 2018, 8, 229–244.

3. Hayes, B.E. *Measuring Customer Satisfaction and Loyalty: Survey Design, Use, and Statistical Analysis Methods*; Quality Press: Welshpool, Australia, 2008; p. 312.
4. Kotler, P.; Keller, K.L. *Administração de Marketing*, 15th ed.; Pearson Universidades: Plzeň, Czech Republic, 2019.
5. Gonçalves, C.; Correia, A.; Diniz, A. Variáveis Internas e Externas ao Indivíduo que Influenciam o Comportamento de Retenção de Sócios no Fitness. *Podium Sport Leis. Tour. Rev.* 2012, 1, 27–60.
6. Coutinho, J.K.F.; Eidt, E.C.; Folletto, E.P.; Cardoso, J.G. Compras online: Análise da influência das variáveis internas e externas no comportamento do consumo de universitários da mesorregião da fronteira sul. *Navus Rev. Gestão Tecnol.* 2017, 7, 18.
7. Freitas, A.L. A qualidade em serviços no contexto da competitividade. *Rev. Produção Online* 2005, 5.
8. Zeithaml, V.A.; Bitner, M.J.; Gremler, D.D. *Marketing de Serviços: A Empresa com Foco no Cliente*, 6th ed.; AMGH: Porto Alegre, Brazil, 2014; p. 664.
9. Fitzsimmons, J.A.; Fitzsimmons, M.J. *Administração de Serviços-: Operações, Estratégia e Tecnologia da Informação*; AMGH Editora: Porto Alegre, Brazil, 2014.
10. Gulfraz, M.; Sufyan, M.; Mustak, M.; Salminen, J.; Srivastava, D. Understanding the impact of online customers' shopping experience on online impulsive buying: A study on two leading E-commerce platforms. *J. Retail. Consum. Serv.* 2022, 68, 103000.
11. Turban, E.; King, D. *Comércio Eletrônico: Estratégia e Gestão*, 1st ed.; Pearson Universidades: Plzeň, Czech Republic, 2003; p. 456.
12. Hameli, K. A Literature Review of Retailing Sector and Business Retailing Types. *ILIRIA Int. Rev.* 2018, 8, 67–87.
13. ABCOMM. Faturamento do E-Commerce Cresce 56.8% Neste ano e Chega a R\$41.92 Bilhões. Available online: <https://abcomm.org/noticias/faturamento-do-e-commerce-cresce-568-neste-ano-e-chega-a-r-4192-bilhoes/#:~:text=O> (accessed on 8 May 2022).
14. Aquino, E.M.L.; Pescarini, J.M.; Silveira, I.H.; Aquino, R. Medidas de distanciamento social no controle da pandemia de COVID-19: Potenciais impactos e desafios no Brasil. *Ciência Saúde Coletiva* 2020, 25, 1–24.
15. Sayyida, S.; Hartini, S.; Gunawan, S.; Husin, S.N. The Impact of the Covid-19 Pandemic on Retail Consumer Behavior. *APTISI Trans. Manag. (ATM)* 2021, 5, 79–88.
16. EYParthenon. Consumo e Pandemia: As Mudanças de Hábitos e Padrões de Comportamento Provocados pelo Coronavírus. Available online: <https://veja.abril.com.br/insights-list/insight-3/> (accessed on 22 May 2022).
17. Paraschiv, D.M.; Țițan, E.; Manea, D.I.; Ionescu, C.D.; Mihai, M.; Șerban, O. The change in e-commerce in the context of the Coronavirus pandemic. *Manag. Mark.* 2022, 17, 220–233.
18. Ebit|Nielsen. Webshoppers. Available online: https://myagmexpress.com/downloads/Webshoppers_42.pdf (accessed on 13 May 2022).
19. Pollák, F.; Konečný, M.; Ščeuľovs, D. Innovations in the Management of E-Commerce: Analysis of Customer Interactions during the COVID-19 Pandemic. *Sustainability* 2021, 13, 7986.

20. Venkatesh, V.; Speier-Pero, C.; Schuetz, S. Why do people shop online? A comprehensive framework of consumers' online shopping intentions and behaviors. *Inf. Technol. People* 2022, 35, 1590–1620.
21. Lashgari, Y.S.; Shahab, S. The Impact of the COVID-19 Pandemic on Retail in City Centres. *Sustainability* 2022, 14, 11463.
22. Food Surveillance. Available online: https://www.prefeitura.sp.gov.br/cidade/secretarias/saude/vigilancia_em_saude/vigilancia_sanitaria/alimentos/index.p p=7035 (accessed on 7 April 2023).
23. Nanda, A.; Xu, Y.; Zhang, F. How would the COVID-19 pandemic reshape retail real estate and high streets through acceleration of E-commerce and digitalization? *J. Urban Manag.* 2021, 10, 110–124.
24. Dixon, T.; Marston, A. The Impact of E-commerce on Retail Real Estate in the U.K. *Journal of Real Estate Portfolio Management* 2002, 8, 153–174.
25. Burt, S.; Sparks, L. E-commerce and the retail process: A review. *J. Retail. Consum. Serv.* 2003, 10, 275–286.
26. Ransbotham, S. The Smart Way to Deal with Messy Data. Available online: <https://sloanreview.mit.edu/article/the-smart-way-to-deal-with-messy-data/> (accessed on 22 May 2022).
27. Matuszelański, K.; Kopczewska, K. Customer Churn in Retail E-Commerce Business: Spatial and Machine Learning Approach. *J. Theor. Appl. Electron. Commer. Res.* 2022, 17, 165–198.

Retrieved from <https://encyclopedia.pub/entry/history/show/110125>