

Consumer Purchasing Patterns in Relation to E-Commerce after COVID-19

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Abstract: E-commerce is the most popular and preferred method of purchasing various items and services. Nowadays, traditional purchasing must take the role of e-commerce. The sole explanation for this is that clients have access to a wide range of products from all over the world at their fingertips. The Coronavirus had a profound impact on worldwide trends. The ecommerce patterns in the coronavirus situation were investigated in this study, as well as how imminent advancement in e-commerce may effect customer behavior in the future. In this paper, a systematic analysis of E-commerce sites have been conducted. Around 62% of individuals experienced a change in their buying perception towards e-commerce sites during the pandemic. Amazon is the most commonly preferred site during COVID, followed by Flipkart. Cash as one of the highly preferred modes of payment for online shopping. These insights indicate a substantial impact of the pandemic on consumer behavior, with a notable increase in reliance on e-commerce platforms, especially for essential goods. The preference for specific payment methods and the likelihood of continuing online purchases post-COVID provide valuable information for businesses to tailor their strategies and services to meet evolving consumer needs.

Keywords: E-Commerce, COVID-19, Online Shopping, Digital platforms, Online Platform

1. INTRODUCTION

Electronic commerce, or e-commerce, is the exchange of goods, services, and data through the internet. Electronic commerce encompasses more than just online buying and product marketing [1][2]. Online shopping is a type of e-commerce that allows customers to buy goods or services directly from a retailer using web portals. Consumers locate a product of interest by going directly to the trailer's website or browsing among the top alternative sellers. Now Customers can shop online utilizing a variety of computers and devices, such as desktop computers, laptop computers, and smartphones[3]. Markets are no longer the only way to buy products and services; anything can now be purchased on the internet. E-commerce platforms make goods and services accessible to millions of individuals all over the world. Humans can use e-commerce sites to meet their needs while sitting at home. It covers the entire process of creating, marketing, selling, delivering, servicing, and paying for items and services via the internet. It refers to any activity that occurs directly between a company, its partners, or its clients via transmission and digital scientific discipline technology. E-Commerce is a modern business model that addresses the needs of businesses, merchants, and customers to reduce costs while improving product and service quality and speeding up service delivery.

E-commerce has become a critical tool for both small and large enterprises around the world [4]. Though the move from traditional to online shopping was slow in the Indian market, this was due to a smaller number of internet users and a lack of public awareness. However, the situation has changed recently, and the e-commerce industry in our country is rapidly expanding [5].

Benefits for People Buying 'Online' through ecommerce sites:

1.1. Lower Costs

Managing an internet store is much less expensive than managing a physical store. Because web-based management solutions enable owners to automate inventory management and warehousing is not always required, an online shop typically requires less staff.

1.2. Convenience and accessibility

Ecommerce websites, unlike many traditional establishments, are open 24 hours a day. Customers can access information about services, view

products, and place orders at any time. In this way, online purchasing is quite convenient and provides the customer more control. Those who live in more remote locations can also order from home at the push of a button, saving them time from having to travel to a shopping center [4][6].

1.3. More Options

Consumers are not limited by the availability of certain products in their local town, city, or nation because there is an almost infinite number of brands and products to pick from. Items can be found and transported all over the world.

1.4. Customers' flexibility

Customers can have more flexibility with ecommerce, which is a significant benefit for businesses. One of the highlights is that the goods and services are available around the clock. As a result, the seller can sell his thing at any time and in any location.

1.5. Comparison of products and prices

The customers can compare products in ecommerce. This gives customers a good notion of the product options accessible, as well as the typical rates, if a product requirement is not met. Online comparison is faster and includes more products - It saves time when performing this comparison because all of the information is available on the purchasing site. Sellers in a physical store may not have access to as many facts - they just have a better understanding of their own goods[4].

1.6. Various payment options

UPI, cash payment, card on delivery, net banking, EMIs on credit or debit cards, and pay-later credit are all options available on ecommerce marketplaces.

2. IMPACTS OF COVID 19 ON E-COMMERCE

Human existence has changed as a result of the spread of COVID 19. Lockdowns, self-isolation, and social distancing were among the measures to be implemented, all of which have a significant impact on digital media consumption in order to keep people employed, entertained, socially connected, and in touch with friends and family. For people to connect, digital channels were the best alternative during pandemic time. In a crisis, technology has shown to be a beneficial and vital tool[7]. In this context, technology has a significant impact on citizens' life, ensuring access to E-learning tools, online digital forums for events, Entertainment platforms, Social media, E commerce, and health care sectors, as well as access to information available online. People feel comfortable and technologically independent for completing tasks when they use digital platforms for varied purposes[8][9]. E commerce platforms were primarily used to deliver the essentials, which included groceries, masks, sanitizers, and other essential commodities. Online ecommerce platforms were used to buy and sell goods and services, and were primarily used to deliver the essentials, which included groceries, masks, sanitizers, and other essential commodities. People are eager to explore more online purchasing possibilities for vital and non-essential goods and services as the COVID 19 spreads. The only worry is the support for enforcing social distance norms due to the low amount of physical interaction required while maintaining security and safety standards. For online transactions, the majority of individuals have turned to digital wallets [10].

COVID-19 has a significant impact on global e-commerce, with some negative consequences, although e-commerce is increasing rapidly overall. The purchasers were driven to utilize the internet and make it a habit in their daily routine because of the Coronavirus. Moreover, there are various obstacles that shops confront in e-commerce, such as extended delivery times, issues with movement control, social distance, and lockdown. Although the shipping and delivery process is now rather slow, people are still purchasing since they have no other option[11][12].

2.1. OBJECTIVE OF THE PRESENT STUDY

- Research the effects of Covid-19 on online buying.
- To figure out what influences online shoppers.
 - To assess consumers' internet shopping habits.
 - To research the elements that customers consider important when shopping online through websites.

- To determine which website is the most popular for online shopping.

3. Methodology

We have gathered secondary and primary data as part of our study, which enables us to determine the extent to which the pandemic influenced customers' perceptions of e-commerce. We gathered information from magazines, newspapers, reports, blogs, periodicals, conference papers, etc. to draw the necessary deductions. The online survey tool, Google Forms, can be used to gather this data.

To fulfill the study's objectives. Data is gathered from all age categories, various working professionals, and students. Here, we studied 251 individuals to determine whether the COVID-19 affected consumers' purchasing habits with regard to online shopping. Data was gathered from many locations, but primarily from New Delhi because the study was conducted online. Pie charts and bar graphs are used in this analysis to visualize the data.

Profile of target group:

The following table 1 and table 2 shows the number of respondents, gender, occupation, age, and their annual income.

Table 1 Gender wise respondents

Particulars	Gender		Grand Total
	Male	Female	
Self- Employed	19	32	51
18-25	9	18	27
26-35	6	8	14
36-45	2	3	5
46-55	1	1	2
More than 55	1	2	3
Service	44	30	74
18-25	10	5	15
26-35	15	10	25
36-45	12	15	27
46-55	5		5
More than 55	2		2
Students	41	85	126
18-25	15	62	77
26-35	26	23	49
Grand Total	104	147	251

Table 2 Annual Income

Particular	Self Employed			Grand Total
	Service	Student		
Female	32	30	85	147
2-5 lakhs	18	9	34	61
5-8 lakhs	9	15	26	50
more than 8 lakhs	5	6	25	36
Male	19	44	41	104
2-5 lakhs	8	12	15	35
5-8 lakhs	9	19	12	40
more than 8 lakhs	2	13	14	29
Grand Total	51	74	126	251

3.1. Result Analysis

The significant impact of cultural factors on consumer behavior, especially in the context of travel, tourism, entertainment, and shopping. Despite the challenges posed by the peak of the pandemic, people continued to engage in social activities such

as gatherings, marriages, and birthday parties. This behavior suggests that cultural values and traditions play a crucial role in shaping consumer decisions. The virtual shift may have been accelerated by the pandemic, influencing consumer preferences and habits.

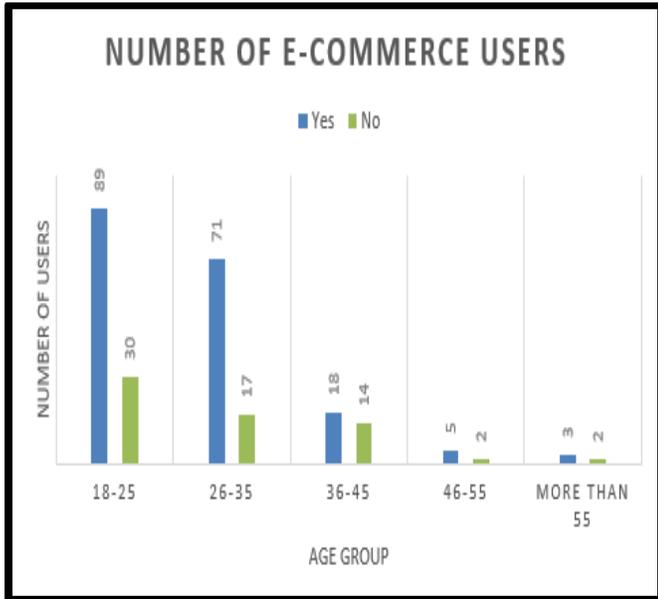


Fig1. No. of E-Commerce users

Fig 1 highlights a trend in the usage of e-commerce sites among different age groups. According to the data, the 18-25 age group is the most active in using e-commerce sites, followed by the 26-35 age group. In contrast, the least number of purchases were made by individuals aged above 55 years. This pattern aligns with general observations and trends in e-commerce usage, where younger demographics tend to be more digitally savvy and comfortable with online transactions. The 18-35 age range often includes individuals who are more likely to be early adopters of technology and are familiar with navigating online platforms for various purposes, including shopping. The lower participation of individuals above 55 years in e-commerce transactions may be attributed to factors such as a lack of familiarity with online shopping interfaces, preferences for traditional retail experiences, or concerns related to online security.

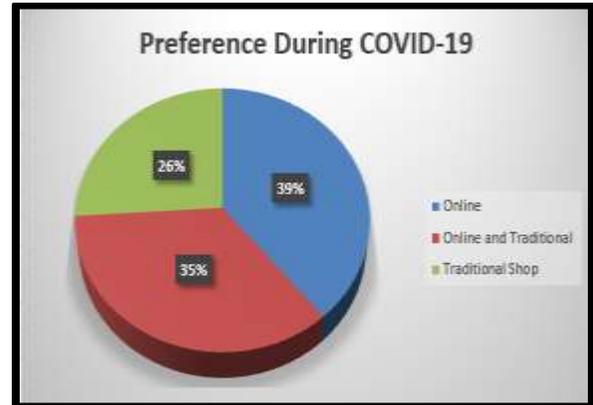


Fig. 2. Preferred mode of shopping

E-commerce sites experienced high demand during the COVID-19 pandemic. Only 39% of users prefer using online platforms for their purchases as shown in Fig 2. This suggests that, while there is a significant demand for e-commerce, a substantial portion of users still has other preferences. There is a preference rate of 35% for individuals who still prefer both e-commerce and traditional methods. This indicates that a notable segment of user’s likes to utilize a combination of online and offline shopping channels. Interestingly, 26% of users believe in traditional shops instead of online platforms. This suggests that a quarter of the users still have a strong preference for traditional brick-and-mortar stores over online shopping.



Fig. 3. Change in buying perception

Fig 3 provided information suggests changes in respondents' buying perceptions toward e-commerce sites during the pandemic. 62% of respondents experienced a change in their buying perception towards e-commerce sites during the pandemic. This implies that nearly more than half of the surveyed individuals altered their views on online shopping, possibly due to the circumstances created by the

pandemic. 12% of people were not sure about changes in their buying perception. This could indicate a level of uncertainty or ambiguity among this group regarding how the pandemic influenced their attitudes toward e-commerce. The remaining individuals (the unspecified percentage) feel that their perception remained the same. This suggests that some consumers did not experience a shift in their buying perception despite the challenges and changes brought about by the pandemic.

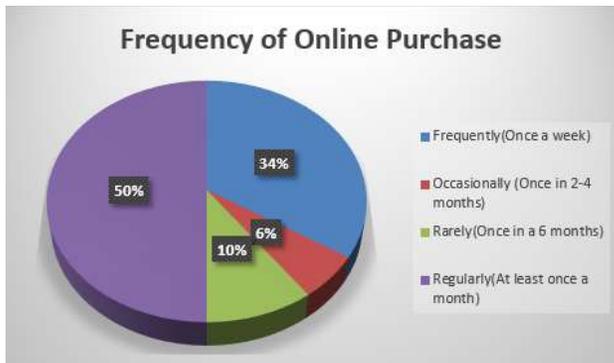


Fig.4. Frequency of online purchases

50% users are using the online platform on a regular basis to purchase their daily needs, only 34% of users make frequent online purchases. 10% of users, prefers to purchase goods online occasionally and only 6% users are rarely using the online platform as shown in Fig 4.



Fig. 5. Most preferred online sites

Fig 5 suggests that Amazon holds the highest preference among the surveyed individuals, followed by Flipkart and then Mesho. These preferences could be influenced by various factors such as the range of products offered, user experience, pricing, and the reputation of these platforms.



Fig. 6. Mode of payments

Cash is one of the highly preferred modes of payment for online shopping as shown in Fig 6. This suggests that a significant portion of users still prefers using physical currency for their transactions. UPI mode is also highlighted as highly preferred. This indicates a strong inclination towards digital wallets and UPI-based transactions. Credit and Debit Card modes of payment that follow cash and UPI in terms of user preference. Net banking as still rarely used. This suggests that, among the various payment methods, net banking has a lower preference among the surveyed user

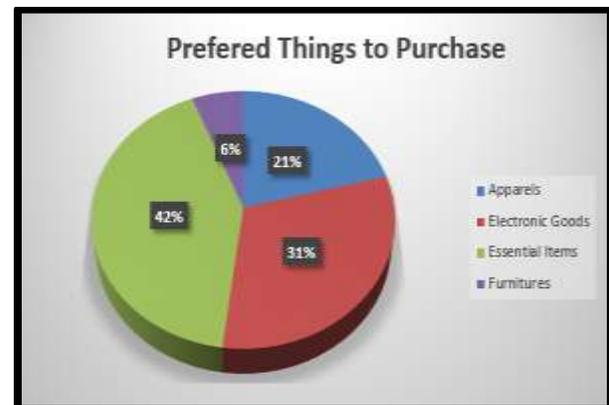


Fig.7. Most preferred goods (online shopping)

Fig 7 showed that most individuals prefer using e-commerce sites for purchasing basic goods, particularly essentials. This likely includes everyday necessities such as groceries, toiletries, and other fundamental items. Electronic goods and apparels are mentioned to be given the same importance. This suggests that, among non-essential items, individuals place a similar level of significance on both electronic goods (such as gadgets and appliances) and apparels (clothing and accessories) when making online purchases.

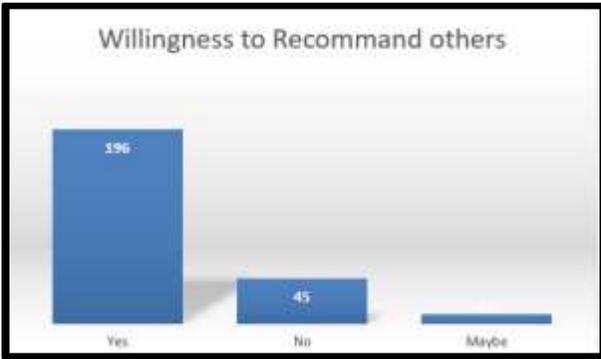


Fig 8. Recommend online shopping

The information provided suggests that a majority of individuals express a high level of encouragement for others to shop online during the pandemic to avoid risks. Significant portion (196) of individuals strongly recommends or advises others to shop online during the pandemic as shown in Fig 8. The primary motivation for this recommendation is likely to be the desire to minimize the risk of exposure to the virus by avoiding physical stores and crowded places.

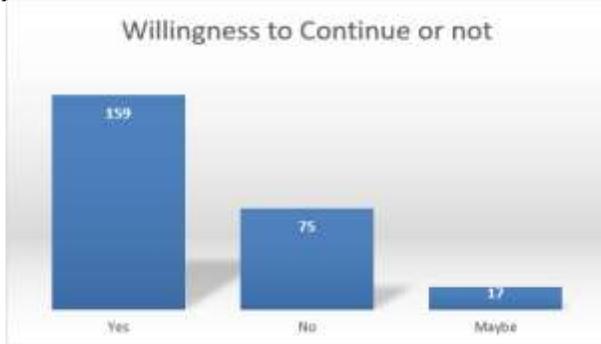


Fig. 9. Willingness to continue e-commerce sites or not

The Fig 9 indicates diverse opinions and attitudes among consumers regarding their likelihood to continue online purchases post-COVID. Consumers are more likely to continue online purchases post-COVID because the convenience of online shopping, described as "hustle-free efforts" and the ease of shopping with different offers, are mentioned as factors contributing to this positive inclination. Some consumers express uncertainty about whether they will continue online purchases in the future. This could indicate a level of hesitation or a need for more time to decide. Others express a desire to shift to the traditional way of purchasing because the desire for a "personal touch factor" suggests that some consumers value the interpersonal and physical aspects of traditional shopping experiences.

4. CONCLUSION

E-commerce businesses became an attractive destination during the COVID-19 pandemic due to the need to avoid the risks associated with physical stores and crowded places. Approximately 62% of consumers experienced a change in their buying perception towards e-commerce sites during the pandemic. This suggests a substantial shift in consumer attitudes towards online shopping during the challenging circumstances of the pandemic. Amazon is the most commonly preferred e-commerce site during the COVID-19 pandemic. Flipkart follows Amazon in popularity among consumers. Both platforms are especially favored for the purchase of essential goods, highlighting their dominance in this domain. Cash on Delivery (COD) is highly prefer to pay online, UPI is also mentioned as a significant mode of payment, following debit card transactions. Consumers are expected to continue making online purchases even after the COVID-19 pandemic. The convenience, ease, and the availability of various offers associated with online shopping are cited as reasons for this likelihood. These insights underscore the pivotal role of e-commerce in adapting to the changing circumstances and preferences of consumers during the pandemic. The shift in buying perception and continued reliance on online shopping post-COVID-19 highlight the importance of e-commerce platforms in the modern retail landscape. Businesses can use this information to tailor their strategies and offerings to meet the evolving needs and preferences of their customer base.

REFERENCES

- [1]. GUPTA, V., KHANNA, V., & SAHOO, B. M. (2018). "ANALYSIS OF SHOPPING TRENDS EMPLOYING E-COMMERCE APPLICATIONS: A COMPARATIVE CASE STUDY," *PROCEDIA COMPUT. SCI.*, VOL. 132, PP. 1728–1738, DOI: 10.1016/J.PROCS.2018.05.148.
- [2]. P. KUMAR N, (2020) "IMPACT OF COVID -19 ON MSMES IN INDIA," *INT. J. MOD. TRENDS SCI. TECHNOL.*, VOL. 6, NO. 6, PP. 76–79, DOI: 10.46501/IJMTST060617.
- [3]. KUNCHAPARTHI, S. (2021) "IMPACT OF COVID 19 ON E-COMMERCE," *J. INTERDISCIPL. CYCLE RES.*, VOL. 12, NO. 9, PP. 1161–1165, DOI: 10.13140/RG.2.2.20236.85127.
- [4]. SONG, Z., SUN, Y., WAN, J., HUANG, L., & ZHU, J. (2019) "SMART E-COMMERCE SYSTEMS: CURRENT STATUS AND RESEARCH CHALLENGES," *ELECTRON. MARK.*, VOL. 29, NO. 2, PP. 221–238, DOI: 10.1007/s12525-017-0272-3.
- [5]. RITA, P., OLIVEIRA, T., & FARISA, A. (2019) "THE IMPACT OF E-SERVICE QUALITY AND CUSTOMER SATISFACTION ON CUSTOMER BEHAVIOR IN ONLINE SHOPPING," *HELIVON*, VOL. 5, NO. 10, P. E02690, DOI: 10.1016/J.HELIVON.2019.E02690.
- [6]. AL-JAHWARI, N. S., KHAN, M. F. R., AL KALBANI, G. K., & AL KHANSOURI, S. S. (2018) "FACTORS INFLUENCING CUSTOMER SATISFACTION OF ONLINE SHOPPING IN OMAN – YOUTH

- PERSPECTIVE," HUMANIT. SOC. SCI. REV., VOL. 6, NO. 2, PP. 64–73, DOI: 10.18510/HSSR.2018.628.
- [7]. GALHOTRA B., & DEWAN, A. (2020) "IMPACT OF COVID-19 ON DIGITAL PLATFORMS AND CHANGE IN E-COMMERCE SHOPPING TRENDS," PROC. 4TH INT. CONF. IOT SOC. MOBILE, ANAL. CLOUD, ISMAC 2020, PP. 861–866, DOI: 10.1109/I-SMAC49090.2020.9243379.
- [8]. BHATTI, A., AKRAM, H., BASIT, M. & KHAN, A. U. (2020) "E-COMMERCE TRENDS DURING COVID-19 PANDEMIC E-COMMERCE TRENDS DURING COVID-19 PANDEMIC".
- [9]. SHARMA A. & JHAMB, D. (2020) "CHANGING CONSUMER BEHAVIOURS TOWARDS ONLINE SHOPPING - AN IMPACT OF COVID 19," ACAD. MARK. STUD. J., VOL. 24, NO. 3, PP. 1–10.
- [10]. KOCH, J., FROMMEYER, B., & SCHEWE, G. (2020) "ONLINE SHOPPING MOTIVES DURING THE COVID-19 PANDEMIC—LESSONS FROM THE CRISIS," SUSTAIN., VOL. 12, NO. 24, PP. 1–20. DOI: 10.3390/SU122410247.
- [11]. ALI, B. J. (2020) "IMPACT OF COVID-19 ON CONSUMER BUYING BEHAVIOR TOWARD ONLINE SHOPPING IN IRAQ," ECON. STUD. J., VOL. 18, NO. 24, PP. 267–280.
- [12]. IRIANI, S. S., & ANDJARWATI, A. L. (2020) "ANALYSIS OF PERCEIVED USEFULNESS, PERCEIVED EASE OF USE, AND PERCEIVED RISK TOWARD ONLINE SHOPPING IN THE ERA OF COVID-19 PANDEMIC," SYST. REV. PHARM., VOL. 11, NO. 12, PP. 313–320 DOI: 10.31838/SRP.2020.12.50.

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