

Impact Of Covid-19 Pandemic On Online Buying Behaviour- An Empirical Study In Kolkata

Dr. Chiranjib Mitra

Assistant Professor

The Bhawanipur Education Society College, Kolkata

Abstract

In the era of modernization and globalization online marketing is a great revolution. Over the last few years maximum business institutions are running with technological transition. Internet shopping or marketing is making the use of technology (i.e., computer) for better & efficient marketing performance. Online shopping is considered to be the new normal in this present world. Evaluating the customer's attitude and perception towards internet shopping and the factors affecting it can assist the marketers and managers to plan appropriately in order to make more profit. The current study is based on online shopping behaviour among students in Kolkata. The study focuses on the area of internet usage pattern and packages of the respondents, their demographic profiles, type of product they shop, factors stimulating online sales, loopholes in online shopping and suggestions for the advancement of online shopping.

Keywords: *Online Marketing, Internet Shopping, Customers' attitude, Customer perception,*

Date of Submission: 06-04-2026

Date of Acceptance: 16-04-2026

I. Introduction

In India, where the population is approximately 135 crores is considered to be one of the biggest markets in the world. In the present world, it is quite evident that the entire world is getting evolved, it had been witnessed that the evolution of marketing starting from production era, product era selling era etc. and it has taken a new form, with the help of technology and digitalization and because of the changing taste and demand, it is now can be called "Online Marketing". The result has been a sharp rise in income and consumption, especially among the growing middle class in urban and rural areas. The industrial reforms have reshaped the Macro environment of the country.

The rise in income level with increased awareness and the urge for purchasing modern goods have affected the marketing environment and the market has changed rapidly during the last few years. Our country is emerging as a large market for a number of goods and services such as consumer goods, durables, financial services, education, health care, telecommunication and the list continues.

With a rapid advancements of Marketing tools & technology, companies are able to sell directly to consumers without using the services of channels of distribution. The important tools are catalogues, direct mailing, telemarketing, fax machines, electronic mail and internet.

In the present time electronic media are being considered as one of the most crucial business tools. Electronic marketing basically involves selling of products and services through electronic channels.

Online Marketing uses data of consumers and prospects and creates continuous flow of relation between customers themselves. Online marketing is a customer directed business and basic marketing regulation apply to Internet marketing too.

A website can complement the definition of marketing. It can identify requirements from customers responses, enquiries and feedbacks through website's mail facility, bulletin, chat rooms and anticipate customer requirements by asking questions and engaging them in a dynamic dialogue. It recognises customer's visit to certain sites, without knowing their names, it knows their interest. It satisfies their interest through prompt responses, order status updates and helpful reminders.

II. Literature Review

Online Shopping:

In the recent trends it had been witnessed that online sales have grown exponentially over a specific period of time. As per Amit (2004), online market had been forecasted to reach \$81 billion in 2006. It is also had been witnessed that majority of the population uses the internet for shopping purposes as well and the number is increasing but what are the driving factor that increased the use of internet and most importantly to shop online.

It is quite imperative that we need to understand the reason behind the growing propensity of customer towards online shopping which have been referred by Andrew (2004) that what factors are responsible or rather

affect the consumer's decision to online shopping and as a researcher we need to develop an in-depth understanding about the factors required to analyse customer's psychology. The research suggest that we need to generate such framework that will define customer's adoption towards self-service technology and internet shopping.

It can be concluded that Online shopping functions can be either consumers' understanding of functional and utilitarian dimensions, like "accessibility" and "usefulness", or their perceptions of emotional and hedonic functions.

According to Bucko (2018), it can be said that relevant online shopping functions also includes exogenous factors that are considered moderate relationships among the core constructs of the framework.

Consumer Behaviour:

The important factors that had been derived externally, in this prospect are "customer behaviour", "circumstantial factors", "product characteristics", "past experience in online shopping" and "reliability and trust factor in online shopping". According to Changchit (2011) by implementing these important elements neighbouring to the basic determinants of customers' perception and willingness to make use of technology, the construct is applicable in online shopping perspective, however these ramifications and influences on customers' perception toward online shopping provide a construct for analysing customer's willingness to purchase on the internet.

According to Creswell (1994) that perception of consumers and their intentions are affected by accessibility, ease of use, convenience and also with the exogenous factors like consumer behaviour, circumstantial factors, past experience and reliability towards online shopping.

Darian (1987) referred that in the most of the European market the online shopping has risen from 27.7% to 31.4% which indicate that most of the population in European market uses internet continuously and as a result the propensity of shopping online is much more increased along with that the volume of the purchase also increased.

It had been found that "Computer playfulness" is the degree of cognitive spontaneity in computer interactions. Playful personage may tend to miscalculate the hardship of procedure of online shopping, because they apprehend the process and do not consider it as being toilsome compared to the people who are less playful. "Computer nervousness" can be defined as an individual's restlessness or even uneasiness when she/he is faced with the probability of utilizing computers. This impacts consumers' perceptions in respect of the "ease of use" of the Internet as a medium of shopping in a negative way, hence using a computer is one of the necessary pre-requisites of online shopping.

Constitutional motivation for online shopping is apprehended by the "enjoyment" construct in our substructure mentioned by Gautam (2004). Congenital value or "enjoyment" derivates from the appreciation of an experience for its own sake, except any other outcome that may result.

Gurinder (2005) concludes that in his studies customers like their internet shopping experience which indicate that they have a very constructive attitude towards online shopping and most importantly to adopt internet connectivity as a shopping tool. In this framework it had been identified three quiescent verticals of "enjoyment" construct, including "escapism", "pleasure", and "arousal" "Escapism" is expressed in the enjoyment that derives from engaging in activities that are fascinating, to the point of offering an escape from the demands of the day-to-day world. "Pleasure" is the degree to which a person feels good, positive, happy, or complacent in internet shopping.

Jinsook (2004), Whereas "arousal" is the extent to which a person feels triggered, awakened or alert during the internet shopping experience. A pleasant or arousing experience will have carry-over outcome on the next experience countered If the customers are exposed initially to gratifying and arousing stimuli during their online shopping experience, at that point they are more likely to engrossed in subsequent shopping traits: they will search more, engage in more unplanned shopping, and look for more products and categories.

III. Objective Of The Study

1. To categorise the factors that stimulates online buying behaviour.
2. To compare the online buying behaviour of students with respect to Gender, Course, Financial independence, Family Income.
3. To compare the online buying behaviour of students before and after the covid-19 lockdown.

Research Hypotheses:

H₁: There is a significant relationship between Gender and Convenience, Service quality.

H₂: There is a significant relationship between qualification and Convenience, Service quality.

H₃: There is a significant relationship between financial independence and Convenience, Service quality.

H₄: There is a significant relationship between Income group and Convenience, Service quality.

H₅: There is significant difference in the attitude of individual between pre-corona situation and post-corona lockdown situation towards convenience and Service quality of Online Buying Behaviour.

IV. Research Methodology

This study includes a combination of Exploratory and Descriptive research Design. Where few areas of the research or the research problems were known so some description required in those areas and there were few areas where research problem was unknown, there exploration required. This study also includes respondents from various colleges in Kolkata. Sources of Data was both primary and secondary data. The primary data are collected from various colleges in Kolkata. The secondary data has been collected from books, articles, magazines & from websites. Sampling Techniques that were incorporated for the purpose of the study was simple random sampling has been adopted. Tools for analysis used were MS EXCEL, SPSS v.25 (Independent “t” test, Factor Analysis, Crosstabs, Frequency).

A structured set of questionnaires were used for collecting the primary data, which consists of questions for demographic profile of the respondents, internet usage pattern, online purchase pattern, and online buying behaviour. The online buying behaviour was measured with 8 statements the questions collected on a 5point Likert scale, where “1” denoted “strongly disagree” & “5” denotes “strongly agree”. For the purpose of scale reliability, Cronbach’s alpha test have been also incorporated. Factor Analysis was used to identify the factors that mainly stimulates the online buying behaviour, along with that to test the Hypothesis independent sample “t” test have been done to understand the acceptance or rejection of Null and Alternate hypothesis. Limitation of the study was due to shortage of time and uncertain situation (pandemic) only limited samples were collected for study.

V. Findings & Analysis

Scale: Reliability of Online Buying Behaviour Scale

Cronbach's Alpha	Cronbach's alpha based on standardized items	N of Items
.786	.793	8

Cronbach’s alpha reliability coefficient generally ranges from 0 and 1. From this Reliability statistics table it can be seen that the value of Cronbach’s Alpha is .786 which is definitely a good statistical value from which it can be inferred that there is a presence of good internal consistency of the items in the scale and also it does not mean that the scale is one-dimensional and also the scales used for online buying behaviour is reliable enough to understand and interpret that online buying behaviour of the respondents.

Here 8 factors have been considered with 5point Likert scale which gives a reliable scaling measure through Cronbach's Alpha value. At the time of using Likert Scale, it is quite imperative to analyse and report Cronbach's Alpha coefficient for internal consistency reliability for scales or sub scales that the researcher may be using.

Objective 1: To categorise the factors that stimulates online buying behaviour.

Table 2. KMO and Bartlett’s test result

Kaiser-Meyer-Olkin measure of sampling adequacy	.811
Pearsonian Chi-square test-statistic (for Bartlett's test of sphericity)	260.083
Degrees of freedom (df)	28
p-value (for statistical significance)	.000

In the above-mentioned test named KMO and Bartlett's test or The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in variables that might be caused by underlying factors. E.g., High values (close to 1.0) generally indicate that a factor analysis may be useful with the data.

It is found that the significance level value is .000 which is less than .05 as a result it can be concluded that the statements are significant at .05 (2 tailed) test.

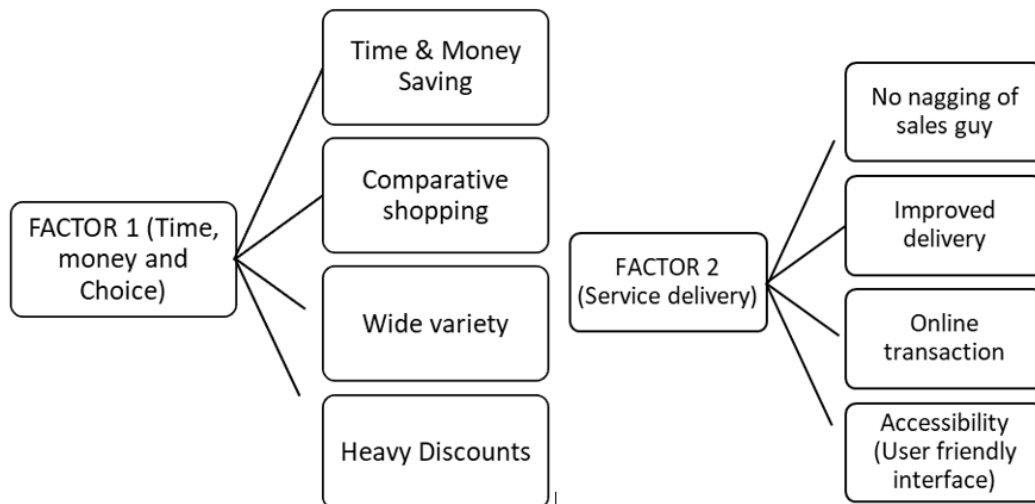


Figure 1. Factors stimulates online buying behaviour

In the Factor Analysis there were two factors have been created because there were only two components have eigen values more then 1 as a result the factors have been labelled as Convenience and Service Quality.

Under Convenience the following attributes have been grouped –

- Time and money saving
- Comparative Shopping
- Wide variety
- Heavy Discounts

Under Service quality the following attributes have been grouped –

- No nagging of Sales people
- Online transactions
- Accessibility (User Friendly Interface)
- Improved Delivery

Objective 2: To Compare the online buying behavior of students with respects to categorical variable which are Gender, Course, Family Income, Financial Independence.

Table 3. Independent sample t-test

	Sig. (2 tailed)
Convenience (Factor 1)	.888
Service quality (Factor 2)	.228

To compare the online buying behavior of students with respects to categorical variable which are Gender, Course, Family Income, Financial Independence. As mentioned earlier that after using factor analysis as factor reduction technique. the factors are reduced to 2.

For Categorical Variable 1 (Gender):

H₀: Equal variance assumed between Male and Female in respect to Convenience, Service quality and Overall Online Buying Behavior.

H₁: Equal variance not assumed between Male and Female in respect to Convenience, Service quality and Overall Online Buying Behavior.

From the above mentioned table it can be understood that as we dealing with normal data and incorporating one of the Parametric test which is ‘t’ test , that means the means are to be compared, here the null and alternate hypothesis are mentioned which is ‘Equal variance assumed’ and ‘Equal variance not assumed’ and as It can be seen that ‘Levene's Test for Equality of Variances’ column for factor 1 which is Convenience , the F value is .935 and corresponding significance value is .337 is shown in ‘Equal variance assumed’ row from which it can be observed that ‘equal variance assumed’ this statement has to be accepted or considered, the corresponding t value for this is .141 and significance value is .888 which is much more higher then .05, as the result is p=.888>.05 hence Null hypothesis is accepted which is Equal variance assumed between Male and

Female in respect to Convenience, and for other factors like Factor 2 which is Service Quality same results have been generated where the 'Levene's Test for Equality of Variances' column the test results are shown in Equal variance assumed row and corresponding p value is .888 which is also much more higher than .05 so for factor 2 again Null Hypothesis to be accepted and same results have been generated in the overall case of Online Buying Behaviour where p value is same with .888, hence from overall test results it can be concluded that Null Hypothesis is accepted that is in terms of Convenience, service quality, and overall online buying behaviour, Categorical variable gender have equal variance among the groups (male and female).

For Categorical Variable 2 (Course):

H_0 : Equal variance assumed between Undergraduate and Postgraduate in respect to Convenience, Service quality and Overall Online Buying Behavior.

H_1 : Equal variance not assumed between Undergraduate and Postgraduate in respect to Convenience, Service quality and Overall Online Buying Behavior.

Table 4. Independent sample t-test

	Sig. (2-tailed)
Convenience (Factor 1)	.997
Service quality (Factor 2)	.290

From the above mentioned table it can be understood that as we dealing with normal data and incorporating one of the Parametric test which is 't' test , that means the means are to be compared, here the null and alternate hypothesis are mentioned which is 'Equal variance assumed' and 'Equal variance not assumed' and as it can be seen that 'Levene's Test for Equality of Variances' column for factor 1 which is Convenience , the significance value is .997 which is much more higher then .05, as the result is $p=.997>.05$ hence Null hypothesis is accepted which is Equal variance assumed between Undergraduate and Postgraduate in respect to Convenience, and for other factors like Factor 2 which is Service Quality same results have been generated where the 'Levene's Test for Equality of Variances' column the test results are shown in Equal variance assumed row and corresponding p value is .290 which is also much more higher than .05 so for factor 2 again Null Hypothesis to be accepted and same results have been generated in the overall case of Online Buying Behaviour where p value is same with .618, hence from overall test results it can be conclude that Null Hypothesis is accepted that is in terms of Convenience, service quality, and overall online buying behaviour, Categorical variable course have equal variance among the groups (Undergraduate and Postgraduate).

For Categorical Variable 3 (Financial Independence):

H_0 : Equal variance assumed between Financially Independent and financially not Independent in respect to Convenience, Service quality and Overall Online Buying Behavior.

H_1 : Equal variance not assumed between Financially Independent and financially not Independent in respect to Convenience, Service quality and Overall Online Buying Behavior.

Table 5. Independent sample t-test

	Sig. (2 tailed)
Convenience (Factor 1)	.339
Service quality (Factor 2)	.113

From the above mentioned table it can be understood that as we dealing with normal data and incorporating one of the Parametric test which is 't' test , that means the means are to be compared, here the null and alternate hypothesis are mentioned which is 'Equal variance assumed' and 'Equal variance not assumed' and as it can be seen that 'Levene's Test for Equality of Variances' column for factor 1 which is Convenience , the significance value is .339 which is much more higher then .05, as the result is $p=.339>.05$ hence Null hypothesis is accepted which is Equal variance assumed between Financially independent and Financially not independent in respect to Convenience, and for other factors like Factor 2 which is Service Quality same results have been generated where the 'Levene's Test for Equality of Variances' column the test results are shown in Equal variance assumed row and corresponding p value is .113 which is also much more higher than .05 so for factor 2 again Null Hypothesis to be accepted ,hence from overall test results it can be conclude that Null Hypothesis is accepted that is in terms of Convenience, service quality, Categorical variable Financial independence have equal variance among the groups (Financial independent and Financial not independent).

For Categorical Variable 4 (Family income per month):

H_0 : Equal variance assumed among the different income groups in respect to Convenience, Service quality and Overall Online Buying Behavior.

H_1 : Equal variance not assumed among the different income groups in respect to Convenience, Service quality and Overall Online Buying Behavior.

		Sum of Squares	df	Mean Square	F	Sig.
Convenience (Factor-1)	Between Groups	28.825	5	5.765	.779	.568
	Within Groups	540.390	73	7.403		
	Total	569.215	78			
Service Quality (Factor-2)	Between Groups	11.723	5	2.345	.626	.681
	Within Groups	273.493	73	3.746		
	Total	285.215	78			

In this above ANOVA table, it can be seen that the F value is .779 for factor 1 shown in ‘Between Groups’ which is quite higher, and higher the F value lower the significance value, which is .568, so from this value it can be concluded that Between different Income groups per month equal variance assumed for factor 1 which is Convenience. For factor 2 the F value is .626 and the corresponding the significance value .681, which is again much higher than 0.05 (the significance level) and from here it also can be concluded that for Factor 2 which is Service quality, equal variance had been assumed among the different income groups per month, hence, the null hypothesis which is Equal variance assumed among the different income groups in respect to Convenience, Service quality had been accepted and the alternate hypothesis had been rejected.

Objective 3: To compare the online buying behavior of students before and after the covid-19 lockdown.

H_0 : There is no significant difference in the attitude of individual between pre-corona situation and post-corona lockdown situation towards convenience and Service quality of Online Buying Behavior.

H_1 : There is significant difference in the attitude of individual between pre-corona situation and post-corona lockdown situation towards convenience and Service quality of Online Buying Behavior.

Table 7. Paired sample t-test

	df	Sig. (2-tailed)
Attitude towards convenience before corona vs attitude towards convenience after corona	78	.000

From table 7 of the paired sample “t” test results for both the factors namely convenience and service quality it can be witnessed that the significance value (p value) in both the cases are .000 which is less than 0.05, hence the alternate hypothesis which is, there is a significant change in the attitude of the individuals towards convenience of online buying behavior have been accepted. And the null hypothesis is rejected.

Table 8. Paired sample t-test

	df	Sig. (2-tailed)
Attitude towards service quality before corona vs attitude towards convenience after corona	78	.000

From table 8 of the paired sample “t” test results for both the factors namely convenience and service quality it can be witnessed that the significance value (p value) in both the cases are .000 which is less than 0.05, hence the alternate hypothesis which is, there is a significant change in the attitude of the individuals towards service quality of online buying behavior have been accepted. And the null hypothesis is rejected. From the tests it can also be understood that the individuals have gone through a significant transition in their attitude towards online buying behavior as in the lockdown period most of the individuals were either forced or by choice bought products from the online retailers either groceries, or medical products or other essential elements, hence the individuals who were reluctant to buy in the online platform had experienced purchasing from online platform and as a result there is significant change in their perception towards online buying and e-retailing. Considering the present situation where digitalization and globalization are two integral part of modern marketing and also given the covid-19 situation the business houses had to consider the online platform as a prime channel for effective functioning of the business and another alternative for physical mode of business.

VI. Conclusions

From this study it had been found there is a great potential for the online shopping in the future with the advancement in Information Technology infrastructure and awareness about the usage of internet in the rural as

well as the urban areas. In the modern scenario, e-retailing and online shopping which will be the integral part and parcel of the people in India. Online shopping and e-Retailing in India can be a great success if the e-Retailers change their business models and understand their consumer more because consumer are the real kings. As India is having huge population and that too majority of them in their age group between 18 to 35 which could be the prime customers for this e-commerce sector so the developed countries have their eyes on India as a business opportunity. From the study it is also has been found that demographic factors (age, gender, income, qualification etc.) have no significant impact on the online buying decisions, and mostly mobile network is been used for internet connectivity and online shopping. From this study it is also found that in the purchase pattern that means when we are analysing the internet usage and their preferred mode of payment, on which occasions they used to buy etc there are several important facts have come up for an example it has been found out that irrespective of gender (categorical variable 1) people buy products in online platform when it is required that means there are very few number of people who can be termed as frequent buyer of the products on the online platform unlike traditional buying process similarly if we consider male then we can see among all the options of buying in the online platform they are more inclined to buy technical products then lifestyle similarly if we consider the female segment of the respondents we will get to see that they are more inclined to buy wellness products along with some lifestyle products. Now if we consider the course (Qualification) as a categorical variable, it can be seen that irrespective of what course you are in people will always buy products as and when it is required and if payment option is considered then most of the respondents irrespective of their course, age, gender even their financial independence status cash on delivery option is always preferred. Few respondents have selected for debit card option but almost no one have selected credit card and net banking option. There is another important variable in the purchase pattern, that is which online platform they most often visit or buy products from, and among all the options Amazon is the most preferred and most visited online portal from the respondent's point of view.

Overall factors responsible for the growth of online shopping in India

From the study it has been found that the Key drivers of in Indian ecommerce have been:

- ❖ Increasing Internet Connectivity and 3G penetration.
- ❖ Improved standards of living
- ❖ Increase in resources.
- ❖ Availability of variety of product choices.
- ❖ Busy life schedule and no time for offline buying
- ❖ Better utilization of online categorized websites.
- ❖ Maximum usage of smart phones
- ❖ Evolution of the e-marketplace framework with sites like eBay, Flipkart, Snapdeal, shop clues, etc.
- ❖ Technological revolutions
- ❖ Advancing the delivery experience
- ❖ Better the payment choices and making it more user friendly
- ❖ Increase in the variety of product categories
- ❖ Enhanced buying experience

Flipkart co-founder had said the online market in India is expected to reach at new level by 2020 with the fastest growing internet-connected population and advancements in related infrastructure like payment and delivery systems. The online travel sector contributed over 65percent of the total consumer e-commerce transactions last year. Over 80% of all internet users in India are also active internet users on their mobile devices and this percentage actually continues to rise. All legitimate online retailers in India have a mobile elevated site and many have an app for smart phones to make the mobile commerce experience better for consumers.

References

- [1]. Andrew, J. R (2004). A Typology Of Online Shoppers Based On Shopping Motivations, Journal Of Business Research Vol. 57 PP. 748-757
- [2]. Amit, B. Sanjoy (2004). A Latent Class Segmentation Analysis Of E-Shoppers, Journal Of Business Research. Vol.57, PP.758-767.
- [3]. Boudraeu, M.C And Watson R.T (2006). "Internet Advertising Strategy Alignment" Internet Research. Vol.16 (1), PP.23-37
- [4]. Cho And Jinsook. (2004). Likelihood To Abort An Online Transaction: Influences From Cognitive Evaluations, Attitudes, And Behavioural Variables. Information & Management, Vol.41, PP. 827- 838.
- [5]. Creswell, J. (1994) Research Design: Qualitative And Quantitative Approaches, London Press: Sage.
- [6]. Michael, R.S. Gary, B. Soren, A (2006). Consumer Behaviour: A European Perspective, Financial Times/ Prentice Hall
- [7]. Gautam, B. (2004). The Impacts Of Quickness, Price, Payment Risk, And Delivery Issues On On-Line Shopping, Journal Of Socio-Economics, Vol.33, PP.241-251.
- [8]. Darian, J.C. (1987). In-Home Shopping: Are There Consumer Segments? Journal Of Retailing, Vol.63, PP. 163-186.
- [9]. Dr. Amit Kumar Singh (2013): (Consumer Behaviour In Online Shopping) Vol.1 ISSN:2347-4696