

Online Shopping: A Study of the Factors Influencing Online Purchase of Products in Kolkata

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Abstract: The internet has become a new platform for electronic transaction and consumers in India are increasingly using the internet for online shopping purposes. Online marketing has thus emerged to be the key to success for many companies and the online presence of organizations has become inevitable in nature. This paper identifies the key factors that influence the online purchase of products in Kolkata. A sample of 150 respondents was selected in Kolkata and a self-administered questionnaire was used to collect primary data. The data was recorded by using a number of open ended questions, close ended questions, and the Likert Scale. Basic statistical tools and Factor Analysis with the help of SPSS version 20.0 have been used in this study for analysing and interpreting the data. The findings of the study showed that the cost factor, convenience factor, product factor and seller related factor are the four important factors influencing the online purchase of products in Kolkata.

Keyword: Electronic transaction, online marketing, online shopping

1. INTRODUCTION

E-commerce or electronic commerce, has experienced rapid growth in the last few decades. The internet has changed the way consumers buy goods and services throughout the world. Traditionally, consumers would actually visit a conventional retail outlet, look for the required product, comparing the alternative products available in the outlet, ask the seller for his or her recommendations and then, would finally purchase it by paying at the counter. However this position has changed drastically with the emergence of 'online shopping' throughout the world. Moreover, many organizations have started to use the internet as a platform for selling their products as it allows them to cut the marketing costs, thereby reducing the price of their products being sold. This has become a global phenomenon, and it allows the organization to stay ahead of others in the highly competitive markets.

The popularity of online shopping throughout the world has increased due to its convenience and often due to the lower prices offered. A consumer is saved from the trouble of searching several stores for a particular product and also from waiting in long queues to buy that product from the store. The growth of online shopping in India is phenomenal. According to Google Online Shopping Growth in India – 2013, online shopping in India has grown 128 percent in 2012-2013 compared to only 40 percent the previous year i.e., 2011-2012. Google India trends have reported that Indians like to shop via the internet. Moreover, further growth in online shopping is expected to arise from outside of the top eight metro cities in India. However, online shopping has its drawbacks also. We cannot touch and feel the item before buying it, there may be a lack of trust in online shopping among consumers, there may be a risk of losing the money, delays in shipping the product may arise, shipping charges may make the low cost items more expensive, etc.

2. LITERATURE REVIEW

The internet has become a new platform for electronic transaction throughout the world, and it has revolutionized the way consumers buy goods and services. According to the study conducted by Karayanni (2003), web shoppers tend to benefit from online shopping in three ways. They benefit from availability of shopping on a 24-hour basis, time efficiency and the avoidance of queues in stores. However, the study conducted by Curtis (2000) highlights that people tend to browse and surf the internet more for information than for online shopping. Moreover, Jones (2000) in his study states that people

find it difficult to enjoy shopping over the internet. The study conducted by Hoffman et al. (1999), highlighted that there is a fundamental lack of faith between most businesses and consumers on the internet. This acts as a major reason why people do not tend to provide information to web providers and online sellers in exchange for access to information and also do not prefer to shop online.

On the other hand, Steinfield and Whitten (1999) in their study suggested that the combination of the web plus physical presence is required to ensure that more consumers will shop online. Such a combination provides better pre-purchase and post-sales services to the consumers and thus, builds trust in online stores and helps to lower consumer transaction costs. Similarly, the benefits of the combination of the web plus physical presence were highlighted in the studies conducted by Wind and Mahajan (2002) and Constantinides (2004), while George (2004) in his study highlighted the importance of consumer trust in online shopping.

Although a lot of research has been undertaken on online shopping throughout the world, there is a need to conduct closer examinations on the online shopping behaviour of consumers in developing countries like India. While a large number of companies like Dell computer, rediff.com, Amazon.com, jobstreet.com, etc. are now using the internet as a medium for selling their products and services throughout the world, a huge research gap still exists between the developed and developing countries throughout the world. Dewan and Kraemer (2000), in their study highlights that this research gap limits the generalization of research results from the developed country contexts to the developing country contexts. Thus the findings generated from the developed countries cannot be directly transferred to the developing countries.

Although online shopping in India has increased rapidly in the last few decades, proper research has not been undertaken to determine what influences consumers to purchase products online. Therefore a thorough understanding the potential of online shopping and the various factors that influence the online purchase of products will help marketing managers to develop appropriate strategies for selling their goods over the internet.

3. OBJECTIVE OF THE STUDY

With the increase in the number of companies offering their products to consumers over the internet, the preference and buying behaviour of Indian consumers is changing. Online selling is becoming a game changer in the Indian market. This research study conducted in Kolkata, focuses on these changes taking place in the Indian market and tries find to out the factors that influence the online purchase of products in Kolkata. Moreover, this study also provides insights into the characteristics of the respondents, and the respondent's online shopping behaviour.

4. HYPOTHESIS FORMULATION

This research study focuses on finding out the factors that influence the online purchase of products in Kolkata. Thus, our aim is to determine whether the factors are specific and correlated or, non-specific and uncorrelated.

The null hypothesis (H_0) is stated as:

H_0 : the factors that influence the online purchase of products are non-specific and uncorrelated.

The alternative hypothesis (H_1) is stated as:

H_1 : the factors that influence the online purchase of products are specific and correlated.

5. RESEARCH METHODOLOGY

In this research study, an exploratory research design and a quantitative research approach have been adopted. Initially, secondary data were collected from books and the internet, and then a well structured questionnaire was prepared. The questionnaire has three sections that relate to the characteristics of the respondents, the respondent's online shopping behaviour, and the factors that influence the online purchase of products in Kolkata. A number of open ended and close ended questions along with the Likert Scale have been incorporated in the questionnaire. A survey was conducted in the different areas in Kolkata, and the sample of respondents included students who were aged 16 to 26 years and adults who were aged 26 to 50 years. Such respondents were selected as they are the most prominent users of internet in Kolkata. In this research study, a convenience sampling method of non-probability sampling has been adopted and the samples have been drawn from 150 respondents. The contact method used was personal interview. Primary data were collected effectively with the help of the self-administered questionnaire. The field survey was conducted from 25/01/2014 to 20/03/2014.

Basic statistical tools and Factor Analysis with the help of SPSS version 20.0 have been used in this study for analysing the primary data, which is collected with the help of the self-administered questionnaire. Factor analysis helps us to determine the interdependence amongst the various factors. KMO statistics and Bartlett’s test of sphericity have been undertaken in this study. The KMO test of sphericity helps to determine whether the sample was adequate to consider the data as normally distributed, and thus highlights whether the factor analysis is appropriate or not. The Bartlett's Test of Sphericity was tested through Chi-Square in order to determine whether the null hypothesis will be accepted or rejected.

6. DATA ANALYSIS AND INTERPRETATION

Table 1, as shown below highlights the number of responses generated towards age, where do the respondents stay, do they buy online products, how frequently do they purchase online products and what is the reason for not purchasing online products.

TABLE 1: Total Responses Generated

		Total Responses
Age	16-26 years	69
	26-50 years	81
Where do you stay?	North Kolkata	30
	South Kolkata	42
	East Kolkata	18
	West Kolkata	20
	Central Kolkata	40
Do you buy products online?	Yes	120
	No	30
What is the reason for not buying products online?	I do not have internet facilities at home	6
	I prefer to touch and feel the product at the shop before buying it	12
	Online shopping is not safe	6
	I find the process to be complex	5
	Others	1

Interpretation: From table 1 we see that the majority of respondents fall in the age group of 26 to 50 years, and are from South Kolkata and Central Kolkata. Moreover, out of 150 respondents, 120 respondents buy products online while 30 respondents do not buy products online. Out of the 30 respondents who do not buy products online, the majority prefer to touch and feel the product in the shop, before purchasing it. Moreover, a respondent who selected the ‘Others’ category stated that shipping charges added to the price of low priced products make them more expensive, so it is better to purchase such products from the stores.

Out of the 120 respondents who purchase products online, the majority of respondents stated that they purchase such products once a month, while only a handful of respondents purchase products online once in six months. However, there

are many people who prefer to buy the products online two to three times a month, and there are some who only buy them once in three months. This is highlighted in Fig. 1 below.

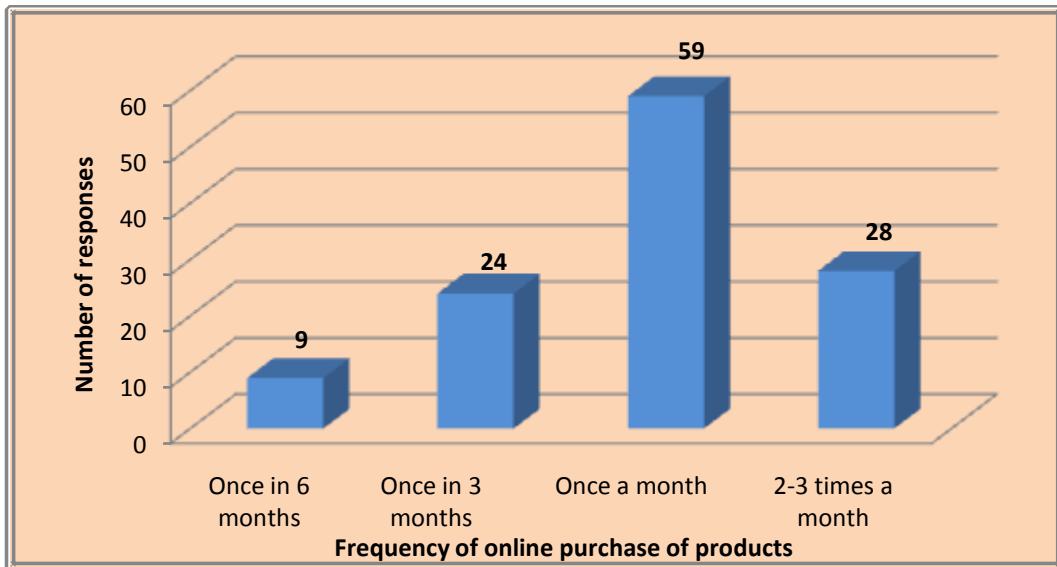


Fig. 1: Frequency of Online Product Purchase

Consumers in Kolkata buy different categories of products over the internet. Fig. 2 below highlights that 25% of the responses is for apparel. This is followed by electronic products, gifts and books. However, few responses are for food and beverages and only 3.48% are for pharmaceutical products. Moreover, 2.08% of the responses are for the 'Others' category, and the respondents have stated that they purchased spectacles, jewelry and second hand products like cars from online websites.

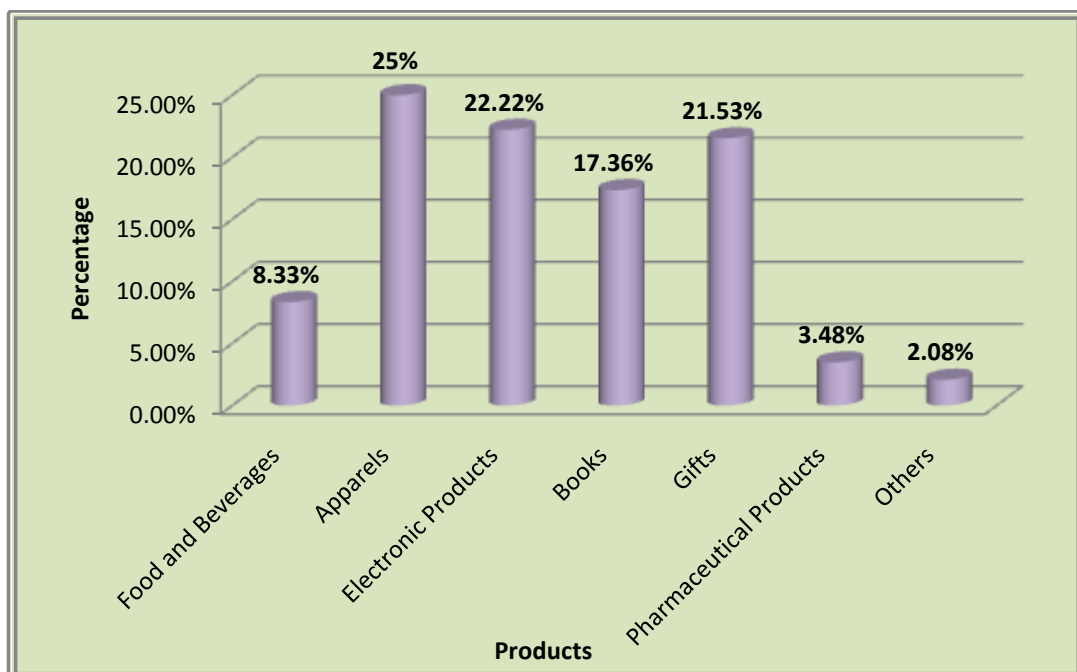


Fig. 2: Preference of Products that are Purchased Online

Fig. 3 below shows us the average amount of money spent per purchase, by consumers in Kolkata when they shop online. It is clear that the majority of the consumers tend to spend Rs. 1000 to Rs. 2000, per purchase when they shop online. However, only a few consumers tend to spend less than Rs. 500 and more than Rs. 5000, per purchase when they shop online.

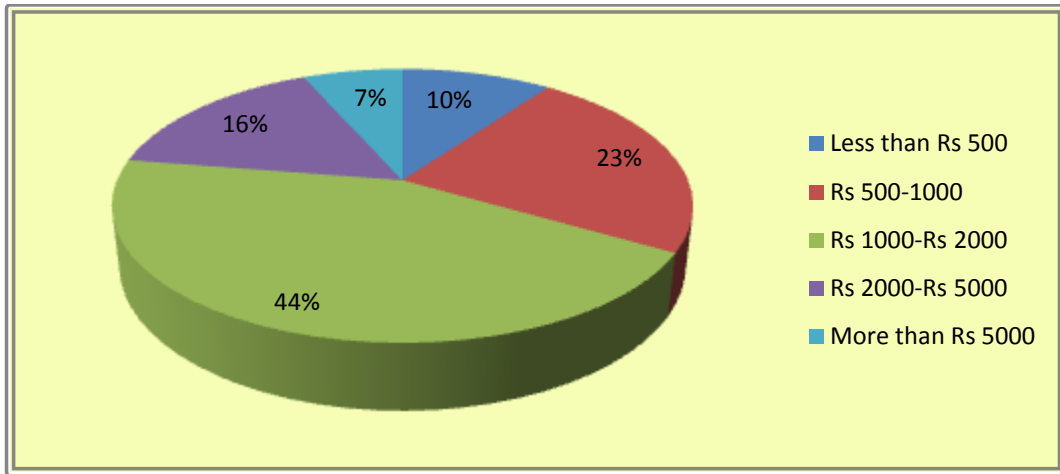


Fig. 3: Average Amount Spent Per Online Product Purchase

In case of the preference for online websites to shop at, the maximum number of responses (17.44%) is for Flipkart. This is followed by Myntra, ebay.in and Jabong. Only a handful of responses are for homeshop18. Moreover, 3.68% of the responses are for the 'Others' category, and the respondents have stated that they purchased products from Shopclues, Pepperfry, Firstery and Olx. This is highlighted in Fig. 4 below.

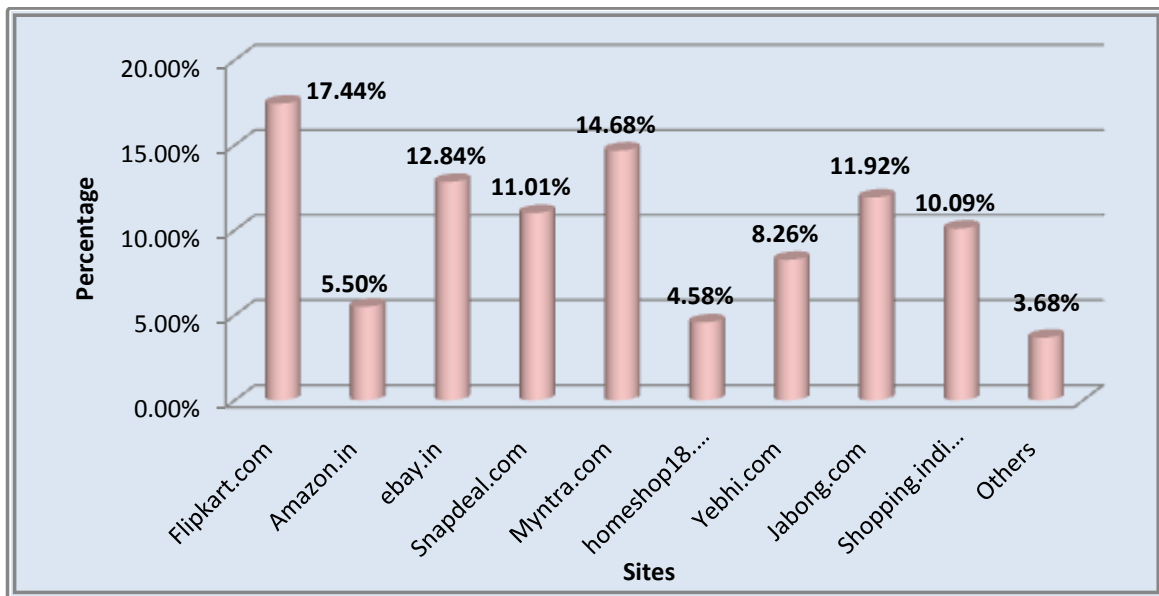


Fig. 4: Preference of Websites for Online Shopping

In order to determine the factors influencing the online purchase of products in Kolkata, factor analysis was undertaken with the help of SPSS version 20.0 and the following interpretations were concluded:

TABLE 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.723
	Approx. Chi-Square	78.269
Bartlett's Test of Sphericity	df	40
	Sig.	.000

According to the KMO and Bartlett's Test table, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy value is 0.723 which is greater than 0.50. This indicates that the sample was adequate to consider the data as normally distributed, and the KMO test is highly significant. The Bartlett's Test of Sphericity was tested through Chi-Square which is found to have

a value of 78.269 at 40 degrees of freedom, which is significant at 0% level of significance, i.e., $p < 0.05$. So we see that there are low chances of obtaining the required results if the null hypothesis was true. Hence we reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1). So we can conclude that, the factors that influence the online purchase of products are specific and correlated. Moreover, as the significance value is 0.00, i.e., $p < 0.05$, we conclude that the variables are correlated.

TABLE 3: Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.728	31.067	31.067	2.711	22.592	22.592
2	2.154	17.950	49.017	2.115	17.625	40.217
3	1.698	14.150	63.167	2.018	16.817	57.034
4	1.124	9.367	72.534	1.860	15.500	72.534
5	.849	7.075	79.609			
6	.663	5.525	85.134			
7	.598	4.983	90.117			
8	.424	3.533	93.650			
9	.377	3.142	96.729			
10	.174	1.450	98.242			
11	.140	1.166	99.408			
12	.071	.592	100.000			

Extraction Method: Principal Component Analysis.

According to the Total Variance Explained table, component 1 explains 22.592% of the total variance among all the variables in the data set, component 2 explains 17.625% of the total variance among all the variables in the data set, component 3 explains 16.817% of the total variance among all the variables in the data set, and component 4 explains 15.500% of the total variance among all the variables in the data set. Thus four factors or components are reported based on the Eigenvalues, and they consist of all the variables. This is graphically represented in the Scree Plot as shown below in Fig. 5:-

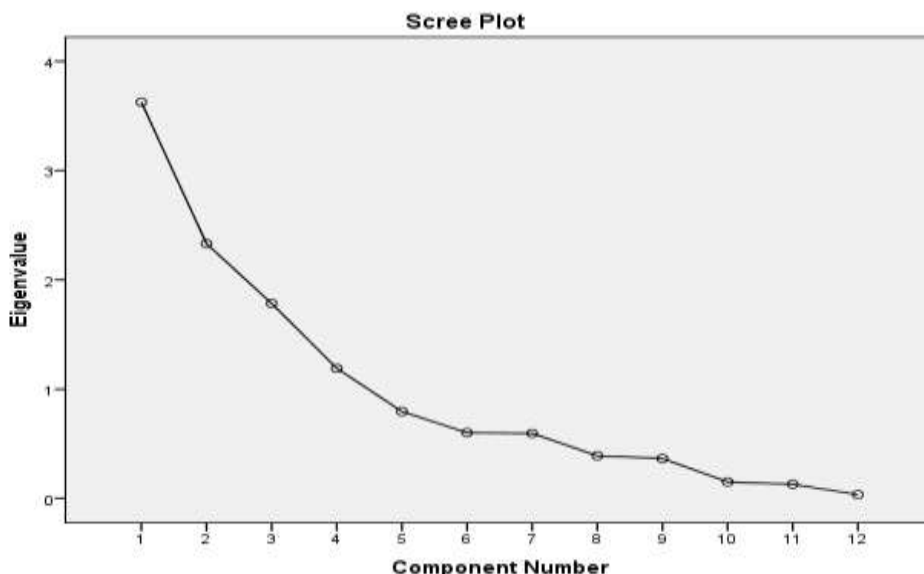


Fig. 5: Scree Plot

The distance between the nodes in the above diagram is based on the Eigenvalues, and we see that the distance between node 1 and node 2 is the greatest. So component 1 or factor 1 explains the maximum variance among all the variables in the data set. Now, as we move down from node 2 to node 3 we see that the distance between the node is shorter than the distance between node 1 and node 2. This confirms that component 2 explains a lesser degree of variation among the

variables in the data set than component 1. Moreover, as we move down the nodes in the Scree Plot, we see that the distance between the subsequent nodes gradually become shorter. Thus, as we move from component 2 to component 3 and then, from component 3 to component 4, the degree of explaining the total variance among all the variables in the data set reduces.

TABLE 4: Rotated Component Matrix^a

	Component			
	1	2	3	4
Product information	.256	.634	.075	-.126
Variety of products offered	-.009	.069	.912	.318
Quality of the products offered	.187	-.283	.673	.278
Price of the products	.744	.068	.437	-.016
Offers and discounts provided	.926	.140	-.039	-.315
Advertising	.087	.214	.015	.831
Safe online payment	.251	.722	-.031	.343
Cash on delivery	.143	.829	.281	-.177
Convenience of shopping at home	-.183	.764	.466	.089
Time saving	.519	.619	.061	-.229
Information of the seller	-.210	.182	.422	.908
After sale service and feedback	.029	.234	-.133	.792

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

According to the Rotated Component Matrix table, we see that price of the products and, offers and discounts provided can be grouped under component 1; product information, safe online payment, cash on delivery, convenience of shopping at home and time saving can be grouped under component 2; variety of products offered and quality of the products offered can be grouped under component 3; and, advertising, information of the seller and, after sale service and feedback, can be grouped under component 4.

Now we name and categorise the factors as follows:

- **The cost factor (Factor 1):** The following are the variables which are grouped under component one or factor one and are concerned with the overall cost incurred by the customer:
 - Price of the products
 - Offers and discounts provided
- **The convenience factor (Factor 2):** The following are the variables which are grouped under component two or factor two and are concerned with the convenience of the customer while shopping online:
 - Product information
 - Safe online payment
 - Cash on delivery
 - Convenience of shopping at home
 - Time saving
- **The product factor (Factor 3):** The following are the variables which are grouped under component three or factor three and are concerned with the product being sold online on the websites:
 - Variety of products offered
 - Quality of the products offered
- **The seller related factor (Factor 4):** The following are the variables which are grouped under component four or factor four and are concerned with the seller i.e., the organization selling the product on the websites:
 - Advertising
 - Information of the seller
 - After sale service and feedback

7. FINDINGS

Internet as a medium of shopping is rapidly growing in India. This research study helps to highlight that the factors that influence the online purchase of products in Kolkata are specific and correlated. The cost factor is the most important factor that influences the online purchase of products in Kolkata. By selling online, a company can undertake cost savings in a number of ways and such savings should be passed on to the consumers in terms of price reductions. Moreover offers, discounts and other sales promotional techniques should be undertaken to attract customers to purchase the products online. After the cost factor, the next important factor that influences the online purchase of products in Kolkata is the convenience factor. After the cost related aspects, the customers focus on the convenience of shopping online as compared to the traditional form of shopping. Customers find it much more convenient to shop at home and it also saves time. Moreover, customers look for proper product information on the websites, a safe and secured online payment system and cash on delivery facilities.

After the convenience factor, the product factor is the next important factor that influences the online purchase of products in Kolkata. Customers will be attracted towards online shopping if different varieties of products and brands with proper quality are offered to them. The last factor that influences the online purchase of products in Kolkata is the seller related factor. Unavailability and unawareness of the seller will prove to be disastrous. Proper advertisements of the seller and its products and brands are crucial to attract customers. Proper information of the seller is also an important consideration. Moreover, customers also look for proper after sale service and feedback from the seller.

8. SUGGESTIONS

Consumers in India are increasingly using the internet for online shopping purposes. As the internet is becoming a preferred market place for the consumers, companies need to use the internet as a platform to sell their products. This will ensure that the company gains an advantage over the other companies in the market. In order to attract customers, companies must use proper pricing strategies. They must use the internet as a selling platform so that the cost savings can be transferred to the consumers in the form of reduced price of products. Moreover, companies must focus on proper sales promotional techniques to attract consumers towards online shopping.

Indian consumers are becoming very sophisticated and smart. Convenience of shopping is very important for them. As convenience of shopping is ensured by online shopping, companies must focus on the internet as a platform for selling their products. Moreover, such companies must also provide proper product information on the websites, a safe and secured online payment system and cash on delivery facilities to the consumers. Indian consumers look for a variety of products and tend to buy good quality products. Companies must provide a variety of good quality products to the consumers to ensure that they achieve a competitive advantage in the Indian market. Companies must advertise themselves and their products to ensure that consumers are aware of them. Proper information of the seller must be communicated to the consumers. Moreover, proper after sale service and feedback from the seller are important elements to be taken into consideration in order to influence online purchase of products in Kolkata.

9. CONCLUSION

With the rapid growth of internet in India, companies nowadays find it much more convenient to sell their products online to the consumers. Changes in the Indian retail sector have cropped up as companies like Flipkart, Jabong, Olx, etc. have started to sell their products to the consumers over the internet. However, Indian consumers are now becoming more sophisticated and smart. They tend to shuffle between physical stores and online stores. In order to do so, they take into consideration a number of factors. This study conducted in Kolkata helps to highlight that a number of factors influence a consumer to buy products online, rather than purchasing it at a physical store. The price factor is the most important factor that affects the choice of the consumers, i.e., whether to buy online or not. Consumers in Kolkata also look for the convenience factor. Proper product information, safe online payment system, and cash on delivery facility attracts them towards online shopping.

However, such consumers also seek a variety of good quality products when they undertake online shopping. Moreover, proper advertising, effective communication of the seller's information, and proper after sale service and feedback undertaken by the seller is very important to influence consumers to undertake online shopping. The seller should adapt

themselves to the changes taking place in the Indian retail sector. They must try to adopt new technologies and focus on providing a perfect shopping experience to their customers. In India, online selling is still in its initial stage, and so the scope here is very wide. However, companies must take into account the four factors that influence consumers to purchase products online. Understanding these factors will ensure that companies can devise proper marketing strategies and will achieve a competitive advantage in the market.

10. LIMITATIONS AND FURTHER DIRECTION

A number of limitations were faced while conducting this research study in Kolkata, and it is necessary to recognize such limitations. Firstly, the survey was conducted in the city of Kolkata only. So the analysis of the results may not reflect the attitude of the consumers of the entire country at large. If further studies are conducted, considering India as a sample, it may portray a different scenario. Secondly, budget is another constraint faced during the project. If the project had been on a much larger scale, the expenses would have also been high. Hence, with limited resources the project was completed. Thirdly, the sample size chosen was also 150 respondents, which is relatively small. Hence, the results obtained can be questioned on its accuracy. Moreover, random selection of consumers was used for the study. As such limitations were faced while conducting the research study, a more comprehensive research approach should be undertaken to better understand the online shopping behaviour of consumers in developing countries like India. In general, more research should be conducted to gain more insights and information, which would be useful for the marketers for formulating their market strategies.

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