
Green E-Commerce: An Assessment of Market Readiness & Movement to a New Competitive Landscape

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Abstract: With the expanding internet reachability and improved broadband connectivity options, the online business has also grown tremendously. The modern generation is more computer savvy and have got more choices than ever before. On the flip side, the online business platforms are also struggling to offer more attractive and innovative marketing ideas. In consideration to the current environmental challenges, it cannot be overlooked as how significant the aspect of sustainability is crucial at both e-tailer and the online consumer's front. Today's customers are socially aware, and they are also cautious about the companies operating procedures to which consumer purchases the things, as company should also follow ethical practices. Safeguarding environment is a major concern for the current generation customers. A study conducted by IBM and National Retail federation, it was found that almost 80% of customers across the globe reported that environmental sustainability was important factor for them, and they now prefer more to buy green products. Today's e-commerce platforms are highly competitive in nature and companies are very keen to create a differentiating factor to stand out in the cut-throat competition of websites. One such marketing strategy which is largely adopted by the online retailers is to present themselves as environment-friendly website, where emphasizing the sustainability aspect and promoting this phenomenon of green e-commerce is a part of their pledge and commitment. This pledge acts as a new hit point in attracting more customers. The paper attempt to analyse the impact of green marketing in online customers and tries to explore factors which they consider in buying products from such websites.

Keywords: e-commerce, environment, green marketing, innovation

INTRODUCTION

With the spiralling awareness of online business and growing number of websites today, customers are equipped with wide variety of options with an advantage of comparing the prices. Customers are socially concern and looking forward for a green online shopping website. With the availability of large number of online shopping options brand building has become more important than ever before, not limited to only attract the customers but also give them a sense of sustainability concern while their shopping experience. (Aras, G; Crothers, 2019). Although with the rising online business models and high growth on distribution of goods and services also raises an environmental concern as the delivery of goods at the doorstep under B to C e-commerce model has been increased many folds in recent times, which is also responsible for high CO₂ emissions (Baldwin 2008). Therefore, alone promoting green marketing and green e-commerce platform would not be sufficient. The e-commerce companies need to coordinate for providing a sustainable environment logistics and alternative transportation must be made available. The past studies have not covered the aspects of integrating green marketing with reference to e-commerce. Therefore, the study tries to develop a model framework where the real benefit of promoting green marketing can be attained by making a perfect balance which is not just concentrating only on the economic benefits but also taking environmental aspects into considerations by adopting more green supply chain and logistics management alternatives.

OBJECTIVES OF THE STUDY

- To identify adoption factors of online consumer behaviour towards online purchase of green products
- To study the perception of online consumers towards green products.
- To give suggestions to online marketers and manufacturers for production of green products.
- To develop a model for explaining online consumer behaviour towards green products

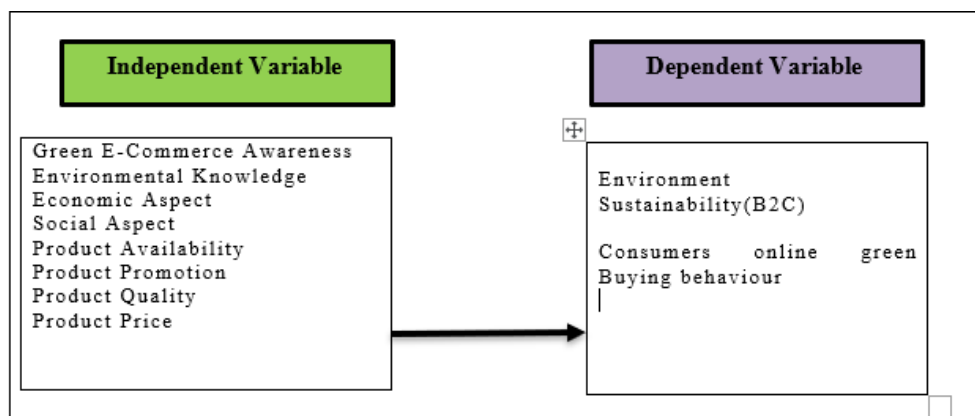


Fig.1: Shows the Schematic Framework of Dependent and Independent variable used in the study.

The primary objective of the paper is to identify as how to do the integration of various dimensions of online green commerce with the environment sustainability to make it more effective online marketing strategy as an emerging space to cater the demands of customers in the varied existing business models. The previous studies have not integrated the economic and sustainability factors with the green e-commerce and have also not highlighted whether simply promoting green products online would be sufficient to achieve the real intention of saving planet. Therefore, the above conceptual framework tries to provide suggestions to each entity seller, retailer and consumer and the policy makers of this e-governance platform.

LITERATURE REVIEW

Global online business is reaching new heights and performing much better than the expectation of e-retailers. Many e-tailing companies have witnessed double digit growth and the forecasts says it will continue to rise for next 5 years (e-commerce report India, 2020). The increased availability of products has also posed the challenge of providing doorstep delivery. Thereby increased complexity of managing shipment of goods from one place to other. (Tang, J; S; Jiang, L, 2016). Such kind of wider delivery of goods have also throws a challenge of handling environmental hazardous, as products are now delivered with the facility of returning then if they do not meet the expectation of consumer (Bratt, C, 2011). The return policy is not just increasing the transportation cost but also affecting the environment, with the current generation customer having better understanding of such business models, consumers also respond to the e-tailing companies to avoid. Such a product delivery, which leads t return. Therefore, promoting sustainability model of e-commerce. (Chaffey, D, 2007). Today’s customer seeks quicker response in terms of product delivery and issues settlement, for which companies are continuously improving their customer relationship management and investing in new applications like artificial intelligence, chat box etc to attract more customers, with the rapid development in the consumer base (Yang. Z, Shi, Y; Yan, H, 2016) have suggested both e-retailers and customers to keep an eye on the increasing carbon emission to deliver products in the different parts of the country. Hence there is a need to sell more green products and firms should improve their Hardware/Software to understand the changing consumer’s demand. So, the product behind should also be immersed. (Wang, J; Huang, X, 2018).

Green Marketing Concept

As per the American marketing association, the products that are environment friendly, marketing of such product is called green marketing. Cooper. T (2000) claimed that there is nothing which could be considered absolute sustainable. Whatever we consume at the later stage it is destroyed and adds negative effect to the environment in different stages of its life cycle. Products can be distinguished based on the amount of impact to which they give to the environment. Kotler (2006) has discussed the marketing as a societal process, as people and communities acquire what they want and need either by creating, exchanging or by offering things and products in return of other things. Therefore, green marketing covers a huge range of activities which includes production, packaging of goods, product modification as well as change in advertising strategies. At the one hand where consumer’s sustainability concern’s have gone into the core marketing it is also imperative to see as how consumers can be made more aware and educated about the availability of green products and how to choose them. Marketing literature from a social perspective considers online green consumer behaviour as an ethically oriented behaviour which fulfils their personal requirements but at the same time they also have a concern for the society and environment too. Thus, environmental concern has become an important element which acts as an influence in customer’s buying behaviour. The environmental concern is not just limited to ordering of groceries, stationary, FMCG but the fashion retail sector has also now started attracting the customers by promoting the concepts of biodiversity, climate changes, oceans, and their recycling approach.



Image 1: Showing the adoption of green marketing in Retail Sector in India

RESEARCH METHODOLOGY

The study adopted the exploratory research model, the study explores the consumer behaviour for online green products.

To ascertain the objectives in the study, the study includes both secondary and primary data. The relevant literature has been analysed to investigate the current situation for green product and online consumer behaviour for green products. Primary data collection method has been used and quantitative methods are used to analyse. The results are than quantified and statistically analyzed to discuss the problems.

Study Design:

The exponential growth of internet and country's youth population with increased literacy level have undoubtedly increased the social awareness amongst the current generation and their social concern have also increased where environmental factor is of high importance. Seeing the rapid growth of environmentally responsible products over a period, the aim of the study is to propose a model framework that is helpful in forecasting the purchase of online green product. The purpose of the research paper is to devise a conceptual framework for the analysis of online consumer behaviour for green product by integrating both economic and environmental concerns. To examine the hypothetical relationships, a survey method has been adopted and used to scale independent and dependent variables. The study also collected a socio demographic data study about the participants who are engaged in green e-commerce purchasing. The study comprises the elements already covered in the previous studies of online purchase of green products in addition of contributory factors essential for integrating economic and environment sustainability aspects.

Data Collection

The data collection is done by a self- designed questionnaire for the study, with linkage to the defined objectives of the study. A questionnaire consisted of 20 statements based on Likert type 5-point scale which were designed to determine the factors constituting the online green purchase consumer behaviour of the respondents. As the self-designed questionnaire is used in the study therefore a pilot study was also conducted on almost 107 respondents and based on their responses necessary changes were made on the questionnaire before the final data collection

Data Analysis and Results

The Reliability and Validity of questionnaire was checked by applying Split-Half method. Chi-Square test, Goodness to fit was applied to 20 questions. The Reliability and Validity of questionnaire was checked by applying Cronbach alpha and Split-Half method. Chi-Square test, correlation was applied to 20 questions, Significance of factors was checked by applying Factor Analysis. The factors thus obtained identifying online consumer adoption of green products in India.

RESULTS

Compiled reliability calculated and obtained was .905 based on 400 valid instances out of 550 cases. This figure suggests compelling proof of reliability in the structure of measuring instruments for the concern variable for the study. Therefore, the questionnaire accepts to be of reliability.

Table 1:

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.905	.825	24

In this research paper a separate goodness-of-fit chi-square tests has been calculated, one for each variable in the data set. For the behaviour variable 400 consumers were evaluated whether the customers feel the difference between traditional online purchase vs purchase of online green products, which, factors encourage them for buying online green products. The data was analysed by using chi square goodness of fit test.

Table 2:

	Test Statistics	Chi-Square	Df	Asymp. Sig.
1	Product promotion of online green product is different from the conventional products.	752.16	4	.000
2	I promote the websites on my social group which sells eco-friendly products.	570.81	4	.000
3	I look forward of getting the detailed description of the green products offered on online platform.	503.49	4	.000
4	Green products offered online meets my expectation regarding the quality criteria.	319.73	4	.000
5	The return policy of online green product is simple in case of dissatisfaction.	525.75	4	.000
6	Online green products usually follow standardised quality criteria.	520.25	4	.000
7	Purchase of online green products gives me a sense of value for money products.	527.66	4	.000
8	Green products offered online are packed differently and appealing.	320.10	4	.000
9	Online green product purchase gives the sense of satisfaction.	406.09	4	.000
10	Online green product purchase gives me sense of healthy purchase.	305.06	4	.000
11	The online green product price is almost similar as the real market price.	557.95	4	.000
12	I prefer to buy more green online products when discounts are offered.	586.07	4	.000
13	Online customer support is prompt in resolving queries related to green products.	344.84	4	.000
14	The availability of green products on websites are consistent.	298.52	4	.000
15	I recommend people to buy online green products to promote the sustainability factor.	524.89	4	.000
16	The environmental concern uplifts my decision of purchasing online green products.	348.21	4	.000
17	Endorsement of green product by the celebrity on websites influences my intention of purchasing online green products.	261.61	4	.000
18	Online green products keep the promise of using recycle material in all the stages of sales process.	451.52	4	.000
19	I prefer browsing those websites more often which works on the slogan of go-green and operates on the principle of environment sustainability.	296.80	4	.000
20	Ordering online green products enhances my social status.	359.90	4	.000

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) value of 0.856 reveals that the sample is adequate for conducting factor analysis.

Table 3:

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.837
Bartlett's Test of Sphericity	Approx. Chi-Square	8017.987
	Df	1326
	Sig.	.000

The result demonstrates that for the present sample the Kaiser-Meyer-Olkin measure of sampling adequacy is 0.837 and Bartlett's test of sphericity is also considerable i.e., 0.00 which is acceptable.

Factor analysis - The preliminary number of factors is the same as the number of variables utilized in the factor analysis, however, not all 20 factors considered. In this paper, only the first seven factors are taken into consideration.

These twenty factors were analysed by using SPSS software. Varimax rotation converged in 7 iterations. The items converged into seven factors structures With Rotation Sum of Square Loadings/ variance of 58.320 percent (under acceptable limit (Nunnally, 1978)).

Rotated Factor Matrix: The Seven factors structure represented by rotated component matrix having items factor loading greater than five (0.5) and hence acceptable.

These are the seven **factors** that were named based on their characteristics:

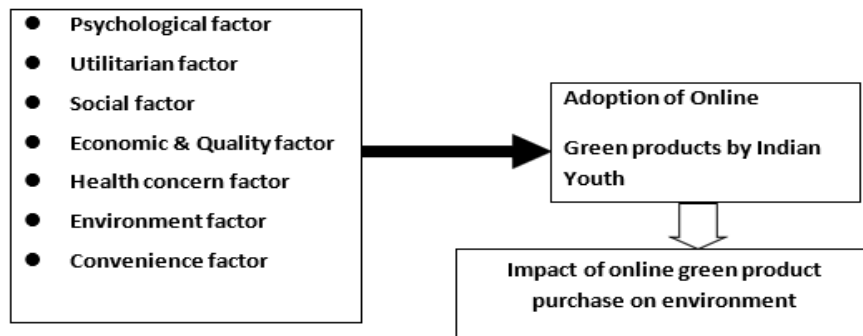


Fig.2: Proposed Online Green products Consumer Adoption Model

The model framework of the research work is developed based on thoroughly researched secondary data and based on findings of primary data research. The above model framework clearly states that the role of psychological factor is an important element while purchasing the online green product and at the same time the utility of buying such products must be clear in the minds of customers, the role of social factor found to be of great importance this includes the social image of customer in the society or community by using a green online product. The economic and quality factors are important for a consistent purchase of online green products by the customer. The benefit of using green products also signifies the health concerns among the online consumers, therefore the benefits should be clearly mentioned in the product packaging and must be easily interpretable. Lastly, the environment and convenience factor show the increasing awareness of online green products among the consumer and with easy return policy and quick problem resolution shows its huge potential in an online marketplace.

CONCLUSION

The Indian e-commerce industry though at its best and showing a huge potential in sheer market size. The e-commerce market will continue to grow in the next coming years. Additionally, the share of green online consumers will also grow. These prospects make the green online market an attractive platform and provides an opportunity for several green products and companies producing green products and creates a new online marketplace for the investors. There is a definite and rapid shift towards moving more and more of the adoption of online green products with alternative distribution channels which are more environment friendly. The development of infrastructure, increasing internet penetration, consumer awareness and availability of quality green online products are also helping in increasing the total market size of online green products.

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