

THE IMPACT OF E-COMMERCE ON TRADITIONAL BRICK AND MORTAR STORES

Deepika Belwal,

Faculty, Department of Commerce, Graphic Era Hill University,
Dehradun Uttarakhand India

ABSTRACT

Some consumers like online shopping, while others do not. What determining factors determine their decisions about the purchasing channel? In this paper, we provide some of our experiences to help a new entrant in the retail industry choose the best operational sales channel between Ecommerce and Brick & Mortar to increase sales. In order to better understand the concept of customers selecting their preferred channel for purchases, this study reviews the literature. We build the framework using statistical models, factor, and discriminant analyses. brick and mortar retailers expect vendors to compete with online/ecommerce retailers The key findings of our study indicate that there aren't many characteristics that distinguish brick-and-mortar stores from internet ones. Understanding the elements that could successfully divide the group and influence a consumer's decision about the purchase channel is vital. The study will assist company owners in comprehending and managing what concerns customers the most.

KEYWORDS: Online shopping, Retailers, Retail Store, Sales, consumer buying behaviour.

INTRODUCTION

The idea of online purchasing was developed with the introduction of the World Wide Web. Tim Berners-Lee developed the first World Wide Web server in 1990. It was made available for commercial usage in the year 1991. several developments in this area in 1994 led to the launch of online banking services by several institutions. The same year, Pizza Hut2 launched an online pizzeria. In 1995, the American corporation Amazon opened its first website for online shopping. In 1999, fabmart.com, subsequently known as Indiaplaza, became the country's first online retailer. Consumer purchasing habits are shifting as a result of online buying. Numerous businesses have developed their online shopping websites and mobile apps in response to the fast advancement of communication technology. The rivalry expanded along with the number of online shopping websites in India and throughout the globe.

Companies that participate in online shopping began to provide products and services at very cheap costs to combat competition. Additionally, these businesses connect with customers and prospective customers online to offer products and services and to solicit customer reviews of the services they have rendered. Customers have used the Internet to compare items, learn about product characteristics, read reviews of products they want to buy, and other things in addition to making actual purchases. Businesses now have the chance to connect with millions of prospective clients from across the world thanks to the Internet. Customers have the ability to buy a range of goods via online shopping websites, including apparel, electronics, cosmetic items, kitchen appliances, home furnishings, books, and more. Customers often utilize search engines like Google to learn more about a product before making an online purchase. The way we buy is evolving daily as a result of increased globalization and the enormous growth in internet use. People prefer internet purchasing over conventional methods of buying as they becoming busier and more technologically sophisticated.

An growth in the usage of smartphones is caused by the advancement of mobile technology and the introduction of 4G technology. Users of smartphones are growing steadily and are anticipated to surpass 760 million in 2021. With a smartphone, internet buying is now simpler than ever. Amazon, Flipkart, Shopclues, Snapdeal, and more online retailers have already released their smartphone applications. Using a mobile app to shop is simpler than using the website since there are no time or location constraints, and users can shop from anywhere at any time. The continued growth in internet use will increase the number of online shoppers in the future and raise their perspectives and expectations. Due to the ongoing growth in internet users both in India and throughout the globe, the number of online shopping websites and portals is projected to expand rapidly. According to recent estimates, the number of internet users will rise quickly in the near future as a result of falling

smartphone prices, expanding network coverage, and cheaper data use costs. Today, both urban and rural regions are seeing rapid growth in the number of active internet users and online buyers. Numerous possibilities exist for businesses and commercial organizations as a result of the growth and advancements in networking technology, data processing, multimedia, and e-commerce.

A lot of businesses are investing millions of dollars, a lot of time, and a lot of effort into developing new internet business models and attempting to figure out new methods to make money. Online platforms allow for the sharing of opinions and ideas with other people in addition to giving ease for buying. In order to sell items on an online shopping site, the business must also perform consumer surveys, just as it would for offline sales, to learn about customers' customs, preferences, spending patterns, etc. E-commerce is continually altering how consumers make purchases. E-commerce has an effect on consumers' general purchasing habits. The consumer's consumption patterns have significantly changed in recent years. The middle class's discretionary income is growing, and they are more likely to spend than to save money. Potential customers now have the option to buy a range of products and services without going to a physical shop thanks to e-commerce. Due to the accessibility of a wide range of things from across the world at reasonable rates, Indian consumers are starting to exhibit a propensity to use and discard items. Compared to a conventional business, e-commerce makes new items accessible for purchase fairly rapidly. Customers may take their time to decide on a final purchase while buying online. However, there is no "touch and feel" element to internet buying.

LITERATURE REVIEW

Nathan and others (2018) 15 did a study to determine the elements that influence customers' online purchasing decisions in the setting of dynamic pricing. The study found that the seven factors—privacy concerns, shopping experience, knowledge of dynamic pricing, buying strategy, retaliation intentions, fair price perceptions, and self-protection intentions—could have a big impact on consumers' shopping behavior and decisions. This research emphasizes the need for e-marketers to properly implement a dynamic pricing strategy by taking into account its effects on customer purchasing behavior.

Jukariya and Singhvi (2018) In order to understand the variables influencing the internet shopping habits of Udaipur post-graduate students, 18 did a research. There are 23 inquiries about internet purchasing in total. Multiple payment choices, the security of personal data, product quality and pricing, delivery speed, and after-sale care are identified in the survey as important variables affecting online purchasing behavior. Additionally, it has been noted that client purchasing habits alter as a result of e-commerce enterprises providing better customer care.

Sisodiya and Sharma (2018) 30 in their research analyze that demographic parameters including age, income, education, and gender have a major influence on customer purchasing behavior. However, as far as the retail industry is concerned, criteria like occupation, family size, and family type have little bearing on how consumers behave while making purchases.

Singh, Mittal and Kukreti (2018) In their study, 30 found that factors such as age, income, education, and gender had a significant impact on consumers' purchase decisions. However, in terms of the retail sector, factors like employment, family type, and size have minimal impact on how customers act while making purchases.

Gurme (2017) To examine the prevalence and effects of internet shopping in Pune, 6 has performed a research. According to a study, age, income, and gender are some demographic parameters that have an impact on internet purchasing in India. 75% of respondents, according to the results, are aware of online shopping platforms. According to research, availability of the goods is the most important consideration when making a buy, followed by quality, price, and security.

RESEARCH METHODOLOGY

In order to get consumer feedback from people who have previously made at least two online transactions, we developed a questionnaire for our research. The survey contained a dependent variable called Future Purchases, which was assessed as a dichotomous variable. Additionally, a five-point Likert scale was used to assess each independent variable, including delivery simplicity, exchange/replacement possibilities, information accessibility, product comparison, urgent desire for the products, and customers' sensory/emotional experiences. A nominal scale was used to collect information on age, gender, and educational level. Using the SPSS Application, the study provides a statistically calculated data summary.

The data collected by the survey was combined, input into SPSS, and then evaluated. Primary data were employed in our investigation. The survey instrument was created utilizing research done by Vijay Mahajan and Alina M. Chircu, which was published in the journal Decision Support System in 2005. Their research was focused on "Managing electronic commerce retail transaction costs for customer value." Most of the instrument's questions from their study could be adapted to our investigation and were therefore used. Inquiries that had no relevance to the investigation were excluded. The questionnaire was sent via a number of channels in order to collect the data. Groups on social networking sites came first, then our team went to a few malls to gather survey information from a sample of mall visitors, and finally college students who had previously made at least two online transactions. 196 people made up the survey's sample size. This study used a quota sample as its sampling strategy. Through social media platforms and actual retail locations, a range of respondents from various geographic places were contacted in order to collect information. Analyzing components Compare and contrast brick and mortar retailers expect vendors to compete with online/ecommerce retailers

DATA ANALYSIS

UNDERSTANDING CUSTOMERS SELECTION OF PURCHASE CHANNEL BY EMPLOYING FACTOR ANALYSIS

Factor analysis was used to determine why people choose to purchase from an online E-Commerce business as opposed to a brick and mortar store. The variables in the survey were divided into many categories by factor analysis. These elements provide an explanation for why buyers choose certain purchasing channels. A multivariate analytical modeling strategy known as factor analysis identifies groupings of associated variables using an advanced type of correlation analysis. Factors are those collections of variables that have a strong correlation with one another. These variables reflect several categories, including purchases done online and in brick and mortar stores. In the questionnaire, there were 12 questions on the preferred channels for client purchases. The questionnaire includes the factors listed below. For the research, correlation coefficients of variables larger than 0.4 were taken into consideration. For factor analysis, the sensory satisfaction variable is deleted since it did not meet the aforementioned requirement.

TABLE 1 QUESTIONNAIRE

Variables included in the questionnaire
Searching Cost
Product Information
Sensory Satisfaction level
Easy Buying & Checkout procedures
Product comparison
Easy delivery
Easy returns
Time constraints
Repeated buying of same products
Product urgency/Immediate need
Shopping with family & friends
Buying experience in retail stores

Fit of the Analysis' Model Kaiser-Meyer-Olkin (KMO) index and the significance of Chi-Square in Bartlett's test of sphericity were assessed to see whether using Factor Analysis was suitable. The measured KMO index was = 0.818 > 0.7, and the observed Chi-Square significance level in the Bartlett's Test was 0.000 0.05 (5% level of significance). The KMO & Bartlett tests produced excellent outcomes. Consequently, the established model continues to hold up.

TABLE 2The KMO & Bartlett tests

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.818
Bartlett's Test of Sphericity	Approx. Chi-Square	431.539
	Df	36
	Sig.	.000

Factor Loadings & Factor Matrix We look for Eigen values larger than 1 to determine the number of components. Two variables with Eigen values greater than 1 emerged from this research.

TABLE3Two variables with Eigen values greater than 1 emerged from this research.

Component	Eigen Values Before Rotation			Final Eigen Values After Rotation		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.402	37.8	37.8	3.361	37.345	37.345
2	1.397	15.525	53.326	1.438	15.98	53.326

Principal Component Analysis is the extraction technique. Nine components were taken into account before to rotation; during rotation, only two factors with Eigen values greater than one were taken into account. When deciding on the purchasing channel, Factor 1 accounts for 37.345% of the variation and Factor 2 15.980%.

Variable Segregation and Factor Identification Rotated Component Matrix divides the variables into several factors in Factor Analysis based on correlation values. Factor loadings below < have been muted and Varimax rotation has been applied in this case. Below is a representation of the Rotated Component Matrix result.

TABLE 4

Rotated Component Matrix^a

	Component	
	1	2
Searching Cost	.669	
Product Information	.651	
Easy Buying process & Check-out	.803	
Product Comparison	.698	
Easy Delivery	.685	
Easy Returns	.618	
Time Constraints	.709	
Shopping with Family and Friends		.833
Buying Experience in Retail Stores		.815

The straightforward correlation between each factor and each variable is represented by the factor loadings. The variables that heavily load a certain factor make up or are the factor. Factor 1 thus consists of: Finding Product Cost Information Easy Checkout & Buying Process Product evaluation Simple Delivery Simple Returns Time Restrictions Factor 2 consists of: going shopping with friends

and family. Experiences with Shopping at Retail Stores Factor 1: Motives for selecting an e-commerce platform Factor 2: Motives to shop at brick-and-mortar establishments The difference in Factor 1 that results in the choice of an e-commerce platform for purchases is 37.345%. 15.980% of the variation in Factor 2 is what determines whether a buyer chooses a brick and mortar store. When and why a consumer decides to make a purchase from an e-commerce site as opposed to a brick and mortar business is differentiated by the factors shown in the table, Rotated Component

Matrix. Important Justifications For Using E-Commerce Websites To Make Purchase Decisions Through the use of discriminant analysis Although there are many factors (variables) mentioned under Factor 1 that influence a consumer's choice to purchase via an e-commerce site, just a few factors may be decisive for a customer when completing a purchase. In order to quantify the characteristics of the two groups (Willingness/Unwillingness to purchase via online e-commerce sites) in a way that discriminates the groups as much as possible, linear discriminant analysis generates a linear equation in terms of all variables.

The Analysis' Model Fitness The model is created utilizing a step-by-step process that begins by adding the most important variable to the model. The significance of ChiSquare connected with Wilks Lambda is 0.000 0.05 (5% significance), and the correlation values among the independent variables are not more than 0.7 according to the findings. The predictors in the model, which are those in Factor 1, are significant and acceptable.

TABLE 5
Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	Df	Sig.
1	0.921	15.89	2	0.000

Easy Delivery and Sensory Satisfaction have been shown to be the differentiating factors from the investigation, according to the structure matrix shown below.

TABLE 6
Structure Matrix

	Function
	1
Easy Delivery	.845
Sensory Satisfaction	-.281

Combined within-group correlations between canonical discriminant functions and standardized variables variables arranged according to the strength of their internal association. a. The analysis did not utilize this variable. "Easy Delivery" is the most important factor among all those that influence consumers' decision to purchase online. Making an online purchase choice is negatively impacted by sensory pleasure (feel/touch).

Classification of Customers' Online Purchase Intent The categorization of clients' purchasing intentions (willingness/unwillingness to buy via online E-Commerce) is predicted based on the discriminant equation created from the study. As seen below, the discriminating equation is created;

$$Z = -2.366 + 1.008 * \text{Easy Delivery} - 0.489 * \text{Sensory Satisfaction}$$

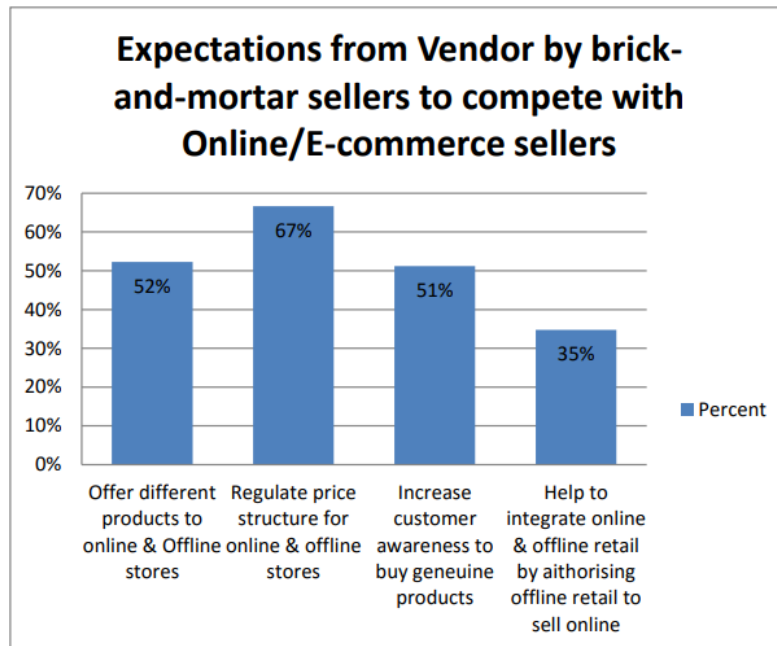
The Z cut off score, created by Edward I. Altman, is used to categorize customers. $Z = (nB * ZA + nA * ZB)/(nA+nB)$ is the formula used to compute Z. In the equation above; nA = Consumers who choose not to make an online purchase nB = Consumers who choose to make an online purchase via e-commerce ZA = Cumulative Z Score of Customers Who Selected to Avoid Online Shopping ZB = the total cumulative Z score of clients who choose to make an online purchase. The Z Cut off score was obtained using the procedure above and is = - 1.588. When a respondent's Z Score falls below the Z Cut off score, they are predicted to belong to Group A, which includes customers who won't make purchases through e-commerce websites; when their Z Score exceeds the Z Cut off score, they are

predicted to belong to Group B, which includes customers who will make purchases through e-commerce websites.

Expectations from Vendors by brick & Mortar sellers to compete with online/ecommerce sellers

The graph is the most appropriate alternative to display the conclusion in this case as well owing to the multiple choice possibilities. Although this is a touchy matter since it relates to the vendor, the manufacturer's job is to control competition between online and offline retail in this case. Since the manufacturer often has the advantage, they can control the supply and the channel. The call from offline retailers to control this so that both channels may coexist is reasonable. Additionally, realistically speaking, striking the ideal balance between the two distribution realms may not be all that simple.

FIGURE 1 Expectations from Vendors by brick & Mortar sellers to compete with online/ecommerce sellers

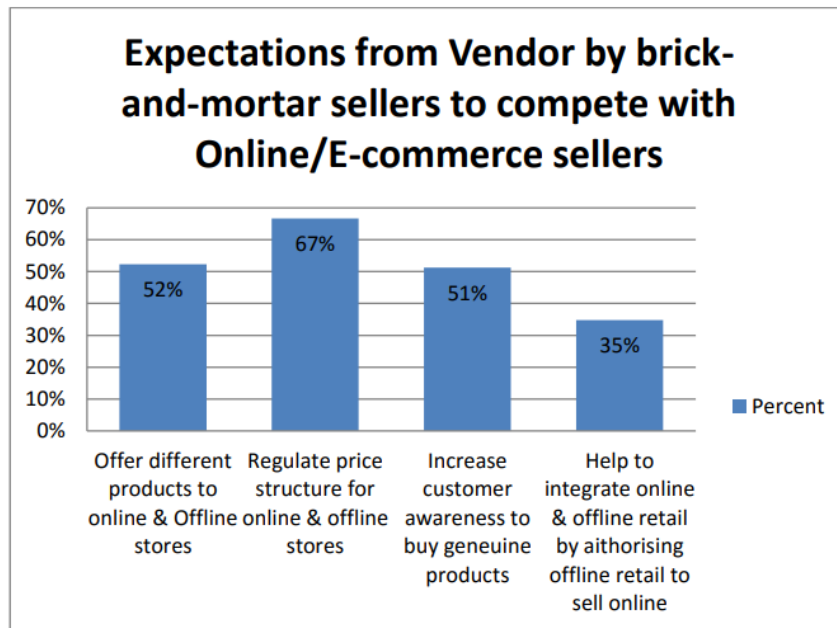


The idea that price would be regulated will increase offline channels' confidence in their ability to compete with online vendors. Price is the most significant aspect that impacts offline retailers when they compete with them online. Offering different product models is a better solution recommended by offline sellers to combat this issue. Another challenge faced by brick and mortar stores is that customers visit offline to check the product or Touch & Feel the same before buying online or just comparing prices of online and negotiating with the offline retailer. Giving consumers bogus or dubious items is a common practice among many internet retailers, which not only hurts the brand but also lowers costs for vendors of real goods. Therefore, offline or brick and mortar vendors anticipate that the manufacturer would educate the consumer on how to purchase authentic items from offline stores and prevent potential warranty or other problems down the road.

Expectations from Vendors by Brick & Mortar sellers to compete with online/ecommerce sellers

As a researcher, I learned during an interview that it is important to acquire honest feedback from offline retailers about their pain issues and communicate them to the public in their own words. Because when any vendor reads these study theses to counter and amend their approach to guarantee that offline vendors' interests are maintained, advantages might flow back to them. In order to maintain the anonymity of the owners' identities, this input was gathered via the survey and recorded throughout the thesis.

FIGURE 2 Expectations from Vendors by Brick & Mortar sellers to compete with online/ecommerce sellers



Due to the fact that price is the component that online retailers use to disrupt offline merchants the most, these offline retailers place the most premium on price management. When there is a sharp decrease in pricing by online vendors, channel groups have even recently agitated to protect the interests of offline retailers. 52% 67% 51% 35% 0% 10% 20% 30% 40% 50% 60% 70% Offer various items to both online and offline retailers. Regulate both online and offline shop pricing Educate consumers about the benefits of purchasing genuine goods By allowing offline retail to sell online, you may aid in the integration of online and offline retail. Brick-and-mortar retailers expect vendors to compete with online/e-commerce retailers, which results in 236 percent of offline retailers being unable to provide their products for sale to customers.

It is essential for offline retailers to seek for controlling this pricing by suppliers since the difference rises during festival offers especially and out of the full year three quarters India observes some or other festival offers from online retail. Now, there are various methods to regulate prices, such by selling unique items or models even though the configuration is the same to prevent direct rivalry between online and offline shopping. Additionally, it might be accomplished by restricting sales in the market to approved offline vendors at set prices. Making online merchants obligated to maintain the market operating price is a policy choice if the goods is sold directly to them. While some solutions can seem profitable on paper, they might not always be feasible.

CONCLUSION

Through this research, two distinct factors were discovered that set apart consumers' preferences for brick and mortar stores and online e-commerce sites as preferred channels of purchase. The factors "Searching Cost, Product Information, Easy Buying process & Check-out, Product Comparison, Easy Delivery, Easy Returns, and Time Constraint" are important when discussing online e-commerce enterprises. Brick and mortar retailers are impacted by "shopping with family and friends and experience in retail stores." Using the information acquired from the factor analysis, a discriminant analysis model was created to determine the discriminating factor that has the most impact on the decision to make an online purchase. The popularity of using e-commerce websites for purchases may be attributed to elements like "easy delivery." Additionally, almost 97% of the sample's respondents—who completed the study—said they would keep using an online E-Commerce platform, demonstrating the viability of the E-Commerce business model.

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