

The Effect of Shopbots on Consumer Purchase Behaviour in Digital Market, Bengaluru, India

Prakash A.*, Antony K. Bijoy**

Abstract

Shopbots are the online search tools which help the online customers to collect the information about various products in the online markets. The word "Shopbots" is the short form of "shopping robots". These Shopbots help the customers to make comparison between the products and their features from different websites, it displays price and other features of the product in a single page. Generally, Shopbots are the price comparison tools that help the customers in comparing the prices of products in other sites, so that the customers get the best products at the best prices from different online sites. After making analysis through primary data of certain aspects regarding the Shopbots, it was found that most of the people do not use Shopbots as they are not aware of it. Most of the customers' purchasing decision is based on their brand loyalty and most of them prefer online shopping on traditional shopping. Even though some people are aware of Shopbots they are only using it as a locator from which they can find cheaper products and they are not aware of the Artificial Intelligence associated with it and also it is used only when they make any expensive purchases. Through this study we came to know that most the people are price sensitive and slight variations in the price may lead to a change in their purchasing decision. Shopbots have an Impact on the customers purchase decision but only to a limited extent because of lack of familiarity of Shopbots among the customers. The main benefit that the public received is that they get to know about Shopbots and majority of people are of the opinion that they will be using Shopbots on their future purchases.

Keywords: Shopbots, Price Sensitive, Brand Loyalty, Comparison Websites, Comparison Shopping Agent, Comparison-Shopping Engines, Digital-Divide, Artificial Intelligence – AI

Introduction

Shopbots can be defined as online search which enables the customers to compare the price and features of different products offered by different vendors easily. It helps to keep a record of data regarding the customers previously viewed products. So, the online retailers will get to know about their preferences and provide the services accordingly. It allows customers to quickly traverse vast product assortments in search of the bargain. While screening & rescreening Shopbots puts pressure on retailer margins, the unambiguous forecasts about their effect may overlook few important factors and create gaps in product/services knowledge. The first factor - the spatial and temporal differentiation enforced by electronic markets between consumers, suppliers and product; service quality attribute. Customer behaviour at Shopbots tends to be driven by retailer variability in service levels, which provides a major source of asymmetric knowledge for Internet customers looking for the "best offer". The Second factor - while it is easy for Shopbots to communicate certain product characteristics, such as price and other characteristics but it is harder to communicate such as service quality and reliability. The Third factor - Shopbots may have broken loyalties between the needs of customers and sellers.

Shopbots searches and provides comparison tables showing variance such as prices, time duration for delivery and availability of products across retailers. Consumers could assess the details of product, services before making a visible decision by clicking on a specific product bid. Shopbots gather and show details of product & services provides summary information on both known and unknown sellers, and usually rate sellers recognised on a shopper-relevant specific details of prices or delivery time. Furthermore, any seller for a Shopbot is just "one

* Associate Professor, Department of PGDM, Krupanidhi School of Management, Krupanidhi Group of Institutions, Sarjapur Campus, Bengaluru, Karnataka, India. Email: prakash_pspl@hotmail.com

** IV Semester, MBA 2019-21, Krupanidhi Group of Institutions, Sarjapur Campus, Bengaluru, Karnataka, India.

click away, lowering switching costs". Any case, these reasons may lead to more competitors and decrease sellers' margins in Shopbots enabled markets. Shopbots are growing increasingly in number and complexities, helping more and more customers reduce spending and optimise satisfaction. The customers of Shopbot, who are among the most price-conscious on the Internet, have a clear preference for well-known, branded retailers. The Consumers who look around for delivery, in particular, mostly choose known brand, possibly due to the difficulty of enforcing guaranteed shipping times. Consumers consider not only costs when using Shopbots, but also delivery options, return policies, privacy rights and brand reputation. The study helps to distinguish the innovations which might help online retailers in Shopbots to attract more customers.

Most product and service providers have created websites where current and future consumers can learn about product features and prices. However, since the amount of information available is so vast, customers may have difficulty locating specific information about goods and vendor substitutes. In this competitive situation, the consumers are assisted by information service providers about combination of information on products and services. Shopbots has become an option and is the reason why digital markets would be more competitive. This has affected the consumer buying behaviour and consumer loyalty. Most of the people's purchase decision is based on the price of a product. So, price can be an important factor that determines the purchasing decision of the people. With the introduction of Shopbots, prospective buyers can now get price offers by online sellers for almost no cost. Shopbots are price comparison software automated tools that searches number of online sellers to collect and compares details for specific product & service.

Shopbots will help the customers to reduce the search cost and it also reduces the vendors chances to differentiate their products. In the current scenario where the taste and preference of the people are changing with the trends Shopbots ensure that it helps the customers in their purchasing decisions as well it also keeps a set of data with respect to their previously viewed products. It is not possible in a physical store to keep a record like this. It will help to know the taste and preferences of the customers without bothering them and thus we will be able to receive an appropriate result. It also helps the customers with their queries in a human level interaction

and helps the customers to choose the right product for them at any time.

This study explains about the adoption and usage of Shopbots in the current scenario. Consumers display a conservative behavioural trend in purchasing goods. The present customer gets choice of goods, which makes consumer quick behavioural changes in decision making. Shopbots have been expanded to various ranges of products and services in business.

We can categorise Shopbots designs into mainly three: stand-alone, contextual and personalised. Standalone Shopbots just gives correlation data over retailer contributions, rather than giving data about the item itself. Subsequently, clients must come to independent Shopbots destinations having just figured out which item they are keen on buying. Initially standalone Shopbots offered impartial postings of items, regularly arranged dependent on cost. The income model of these Shopbots depended on standard promotions and the retailer commissions, normally 3–5% for deals produced through the Shopbots site. When compared to the conventional physical world with online business, the online costs little money, which promotes the online sellers providing wide range of brand names and service quality.

Internet Services Industry

The influence of the Internet is well known in economic, social and political environment. The digital market has many organisations products, services information enabling sellers to share price and product information with potential consumers. The efforts of the digital markets is to provide a quick information on products & services, its prices, delivery schedule and such other roles to bring together sellers and consumers using Shopbots. Digital markets may affect other factors such as security, etc., this study emphasis on the impact of shopbots on consumer behaviour.

Review of Literature

O'connor, Gina Colarelli and Robert O' Keefe (2000) "The Internet for a New Marketplace: Implications for Consumer Behaviour and Marketing Management" a handbook on Electronic Commerce. Michael Shaw, Robert Blanning et al., It explores how out-of-date marketing practice and strategy would be affected by

Internet of Things. The emphasis on customer behaviour in digital markets, and how the sellers and consumers interact. Technology development empowered Internet of Things enables sellers and consumers communication are emerging. Centered on the buyer behaviour, drawing insights to create an ecosystem which differs from conventional marketing. The need of user encouraged numerous ways. It looks for alternatives, compares competing products and looks at choices, picks, buys it, tests it for potential buying process. A methodical consideration of factors ensures that users will dismiss typical behaviour and replace them with modern approaches to the technology of the Internet.

Smith and Brynjolfsson (2001), Consumer Decision-Making at an Internet Shopbot: Brand Still Matters. *The Journal of Industrial Economics*, 49(4). ShopBots turned out to be actual mediators of balancing consumer needs and supply, thus promoting business model both for consumers and retailers. Though, the model of Kocas (2002) ignored to take into account the responses of retailers, major challenge in the context of a market. While sellers were unable to break the technology growth, and effective approaches to fight the complete disappearance of irregularities in information. (Grover et al., 1999), Many studies find, that both price levels and price distributions of few stock keeping units are significantly higher in online compared to offline.

Customers uses shops before they make any purchase decision in the online markets. Most of the customers prefer to have a precise representation of markets. In selecting correctness shopbots may evaluate the customer wants regarding allocating cost of service relating to desire of sellers who are referred to as the largest source of income suppliers. Online shopping has lowered the cost of price comparison among the retailers. The Shopbots collects the information about the products from different sites and present it in a summary form which makes the purchase decision easy for the customers.

Digital platform search engines, especially shopbots, have cut down search time & cost for product features & its price for consumers. Few predictive analytical tools enables consumer search among competing retailers would lower price levels, the transformation of Shopbots usage about consumer behaviour in digital market.

Consumer behaviour is how a customers choose, acquire, accept and adapt about a particular product, service

which fulfil their need and want, pattern consumer buying behaviour can be analysed through personalised marketing. After this future prediction on trends can be done easily. "Consumer behaviour" is explained by Engel, Blackwell et al., "the activities to decide and processes people make to purchase products or services for their individual usage".

Information Technology could be conciliators in a market amongst consumers and sellers, providing "electronic marketplace" which decreases search time & cost of buyers' accessing details on product service price offers of sellers. By using Shopbots, customers are now visiting more online retailer websites. This finding indicates that customers would persist to consider for specific details of online sellers using Shopbots obtaining the price data. Therefore, the reduction of customer search by Shopbots change on the cost, usage risk is determined by another issues like search costs, distribution of prices and distinction between shops, correlation of prices, comparative inclination of customers.

The distinctive feature of online shopping ecosystem allows suppliers with collaborative features to build relationship with consumers. Consumers habitually look around for range of potential goods initially and choose the attractive one. Given the different tasks to be undertaken in such selection process, it is especially useful to use interactive resources that provide support to customers initial search, selection and result in purchase action.

Need and Importance of Study

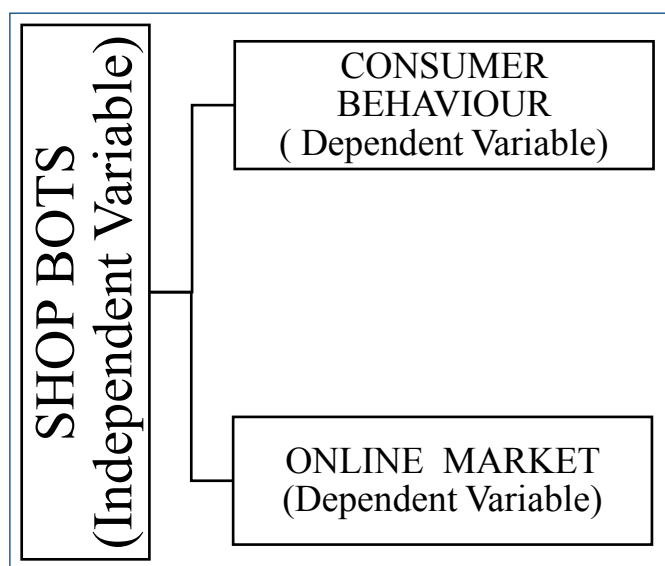
Even though Shopbots were in existences from 1995 the people were not much aware of it. Likewise, there existed the need for Shopbots among the people. On the basis of price factor, the people have always tended to change their purchasing decision. Currently shop bots are commonly used by most of the people in India. Youth, in particular, are highly responsive on the total price distributed between costs of item, shipping and taxes, as well as the ordinal ranking of retailer products in terms of price. It's found that youth use brand as a substitution for a seller's trustworthiness, with respect to features of the product, service offer, and delivery period. For every sample case, it predicts consumer behaviour, factually considers information, data of appropriate individualities of consumer selection process.

This study is mainly conducted in order to realise the influence of Shopbot about consumers purchase behaviour in digital market. And it also focuses to understand the socio-psychological profile of the demographics segment, the level of adoption & awareness of shop bots in the Indian online market, to find out whether Shopbots has any impacts on online shopping behaviour of the consumer specific to youth, to analyse the factors that drives youth in using shopbots and to find out whether the shop bots are biased towards the online retailers.

Objectives

- To study the effect of Shopbots on consumers purchasing behaviour in online markets in Bengaluru, India.
- To identify the level of adoption & awareness of shop bots in online market in Bengaluru, India.

Conceptual and Operational Definitions of Variables



Independent Variable

Shopbots

Consumers use Shopbots to compare prices of different products from different sites. Customers use shops before they make any purchase decision in the online markets. How well do the Shopbots assist online buyers? Most of the customers would prefer to have a precise

representation of markets. While selecting, Shopbots have to balance the wants of customers regarding costs, allocating facilities and desire of sellers who are referred to as the largest source of income providers. Online shopping has lowered the cost of price comparison among the retailers. This comparison site collects the information about the products from different sites and presents it in a summary form which makes the purchase decision easy for the customers.

The Shopbots are smart means of tools acts as human which includes a search engine. In digital platform shopbots has become key channel for online business. Shopbots have played an important role. Shopbots have gathered much consideration in the recent years; the survey may help retailing industry.

Dependent Variables

Consumer Buying Behaviour

Business success depends on understanding consumer behaviour - how customer/s choose, acquire, accept and adapt a particular product service which fulfils their needs and wants. Pattern consumer buying behaviour can be analysed through personalised marketing. After this future prediction on trends could be assessed. Every human want to satisfy his or her requirements as they are an important part of the human life. For satisfying this needs people go to the market for purchasing goods and services in return of the money? It can also be defined as a study which helps the customers to make a decision about their purchase. Consumer behaviour can be studied before making any purchase and even after making any purchases and thus it helps the companies to find out new trends and chances in the market.

Online Market

The traditional marketing is hazing due to entrance of online marketing which has been spread across the world. The different branches of online market include social media; blogs, chat forums and other general troubleshoot forums. Sharing of information regarding the products and services has become much faster in digital era and it has also enabled several innovations. Online marketing has the ability to influence the consumers' behaviour and it also alters brand perception of different products

of different industries. In this current scenario the customers not only purchase a product but also affect the markets by sharing the product quality, features and other characteristics through certain online forums and social media.

Scope of the Study

The survey helps to recognise the innovations would be done by online retailers in shopbots to attract more customers. This study is mainly conducted in order to discover shopbot impacts consumers purchase behaviour in online market. And it also focuses to understand the socio-psychological profile of the demographics segment, the level of adoption & awareness of shop bots in the Indian online market, to find out whether shopbots has any impacts in digital shopping of the consumer, to analyse factors that drives people in using shopbots and to find out whether the shop bots are biased towards the online retailers.

Research Methodology

This section covers research design and apparatuses for analysis.

Research Design

A Cross sectional survey was carried out. Primary source of information is structured questionnaire.

The technique used - collect questionnaire was Random sampling. The data collection was conducted from about 105 respondents comprising of male and female respondents respectively. The survey covered all levels of people. Analytical tools for data analytics are correlation analysis and explanatory statistical analysis.

The primary data for this analysis was gathered using a standardised questionnaire in the form of Google forms. Respondents received the forms through social media platforms such as WhatsApp, Facebook and Email. The information was gathered from 105 people.

There are few limitations in this study due to current situation and time constraints, some of them are: As the survey carried out in Bengaluru, India, They were not aware of Shopbots and as a result majority of the respondents were filling the questionnaire without having knowledge.

Due to the random sampling technique applied, the approach does not make use of the population’s existing expertise.

Data Analysis

Demographics

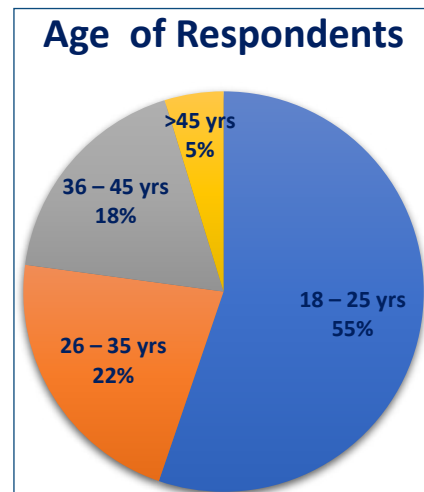


Fig. 1

The above portrays the age groups of respondents who took part in the survey. More respondents of about 55.2% were of the age group 18–25 years; 21.9% respondents constitute age from 26 to 35 years; 18.1% constitutes age from 36 to 45 years, and other respondents 4.5% respondents aged above 45 years.

Respondents

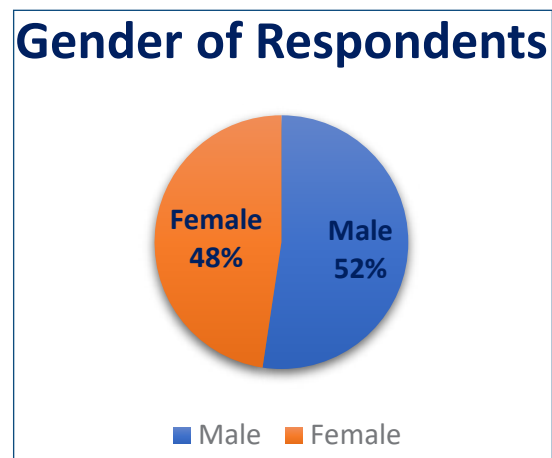


Fig. 2

The above Fig. 2 depicts the Respondents. Male respondents were 52.4%.

Occupation of Respondents

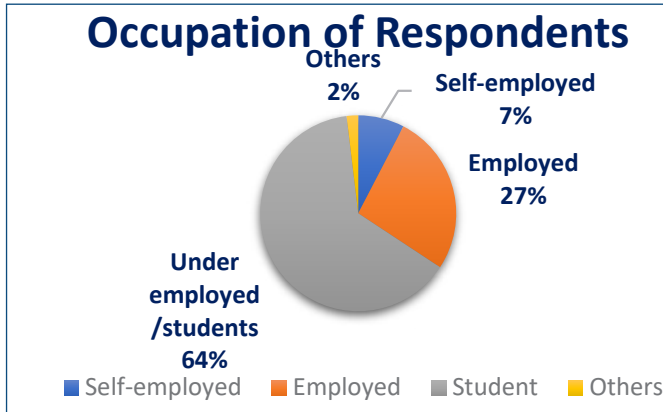


Fig. 3

The above Fig. 3 represents the occupation group of respondents who took part in the study. Majority of the respondents about 63.8% were of the category of younger generation. About 7.6% belonged to the category of self-employed; about 26.7% belonged to the category of employed; about 63.8% belonged to the category of underemployed/student and the remaining respondents 1.9% belonged to category of others.

Current Income of Respondents

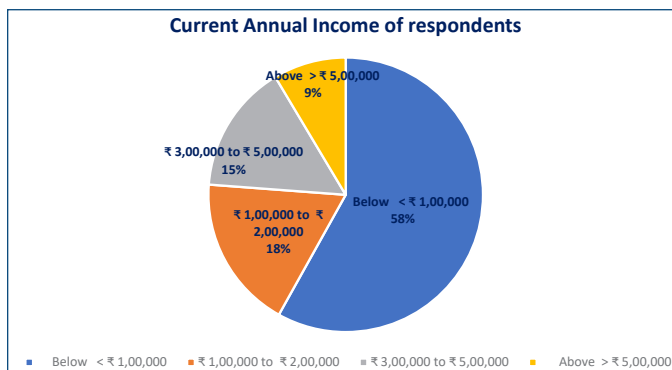


Fig. 4

The above portrays the Annual income of respondents of survey. Mainstream respondents 58.1% have very low income as they may be either Under-employed or students. About 8.6% have income below ₹1 Lakh; About 9.5% have income of ₹1-2 Lakh; About 15.2% have income of ₹3-5 Lakh and the remaining respondents 8.6% have income of ₹5 Lakh & above.

Awareness

Type of Shopping Preferred by the Respondents



Fig. 5

The above depicts the shopping type preference by respondents who took part in the study. About 49.5% prefer online mode of shopping and the majority 50.5% of the respondents prefer retail shopping.

Regularity of Online Purchase

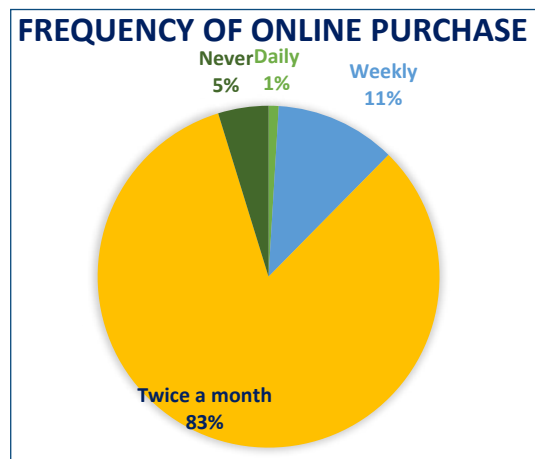


Fig. 6

The above portrays the frequency of online purchase by respondents who took part in the survey. About 82.9% belonged to the category of twice a month purchasers, 11.4% belonged to the category of weekly purchasers; about 1% belonged to the category of daily purchasers;

and the remaining 4.8% belonged to the category of never online purchasers. The majority of the respondents 82.9% were from the category of twice a month purchasers.

Shopping Spent

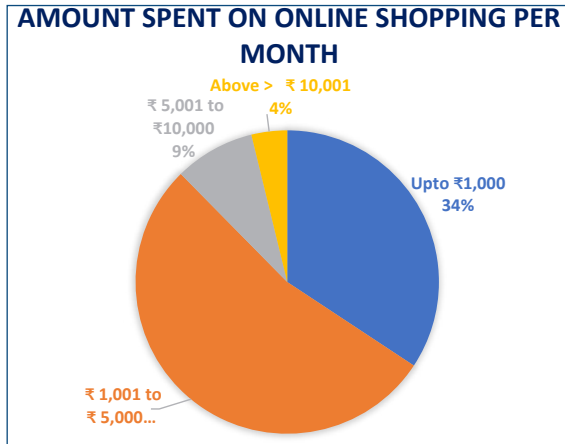


Fig. 7

The above portray the amount spent on shopping per month by respondents who took part in the study. About 34.3% respondents belonged to the spending group of ₹0–₹1,000; about 53.3% belonged to the spending group of ₹1,001–5,000; about 8.6% belonged to the spending group of ₹5,001–10,000 and the remaining respondents 3.8% spending ₹10,001 & Above. The mainstream people spend ₹1001–₹5000 for shopping per month which is 53.3% of the respondents.

Products Purchased by Respondents from E-Market

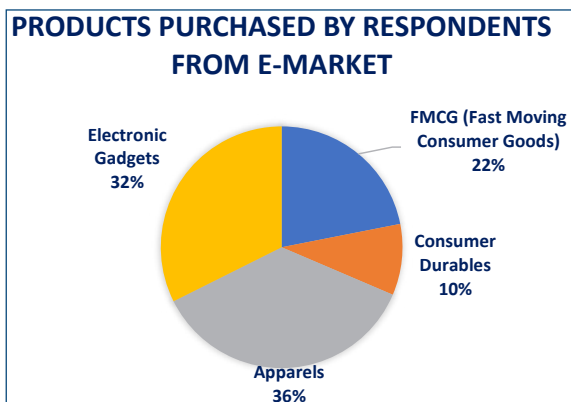


Fig. 8

The above Fig. 8 illustrates the products purchased from E-market by respondents who took part in the study.

About 21.9% belonged to the category of FMCG, About 9.5% belonged to the category of consumer durables; About 36.2% belonged to the category of apparels and the remaining respondents; About 32.4% belonged to category of e-gadgets. The majority of the people 36.2% purchase apparels from E-market.

Driving Factors for Online Purchase

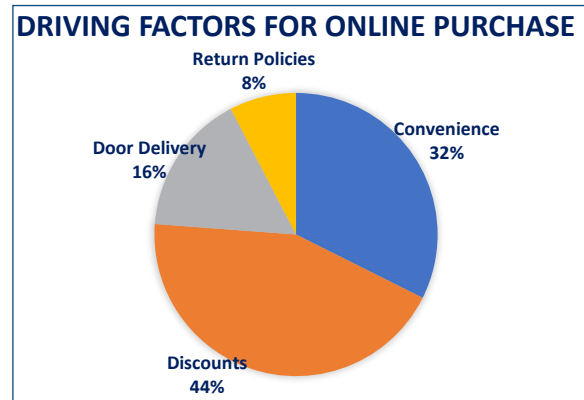


Fig. 9

The above portrays factors that drives for online purchase by respondents who took part in the study. About 32.4% chooses for convenience factor; about 43.8% chooses for discounts; about 16.2%) opts door delivery and the remaining respondents of 7.6% chooses in return policies. The majority of the people about 43.8% choose for online shopping for the discount offers.

Awareness of Shopbots

Awareness of Shopbots by the Respondents

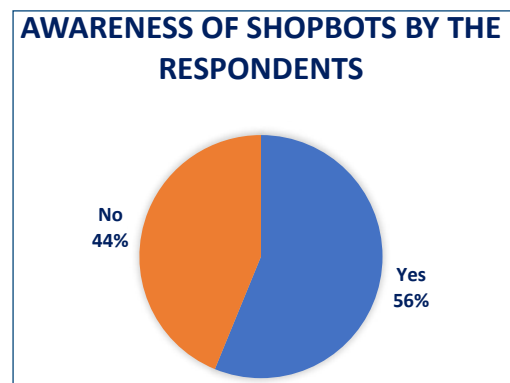


Fig. 10

The above portrays the awareness on Shopbots by respondents. About 51.4% are aware of Shopbots and the

remaining respondents 48.6% are not aware of Shopbots. The majority of the people are aware of Shopbots 51.4%.

Frequency of using Shopbots by the Respondents

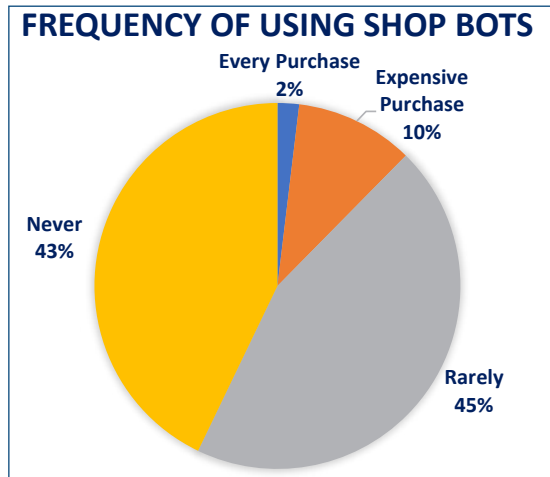


Fig. 11

The above represents the frequency of using Shopbots by respondents. About 1.9% chooses for every purchase, nearly 10.5% chooses to buy expensive purchase, about 44.8% chooses rarely and the remaining respondents 42.9% opts never use Shopbots. The majority 44.7% of the people rarely use Shopbots for online shopping.

Price Variation Influences on Purchasing Decisions

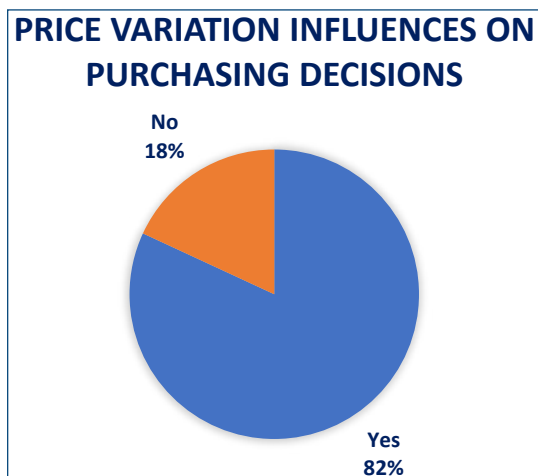


Fig. 12

The above depicts the Price variation influences on purchasing decisions by respondents who took part in the study. From the sample size of 105 respondents, 86 (81.9%) has stated that minimum price variation in a product will change their buying decision and the remaining respondents 19 (18.1%) has stated that minimum price variation in a product will not change their buying decision. The Majority of the people have stated that minimum price variation in a product will change their buying decision (81.9%).

Influence of Shopbots on Purchasing Decision of the Respondents

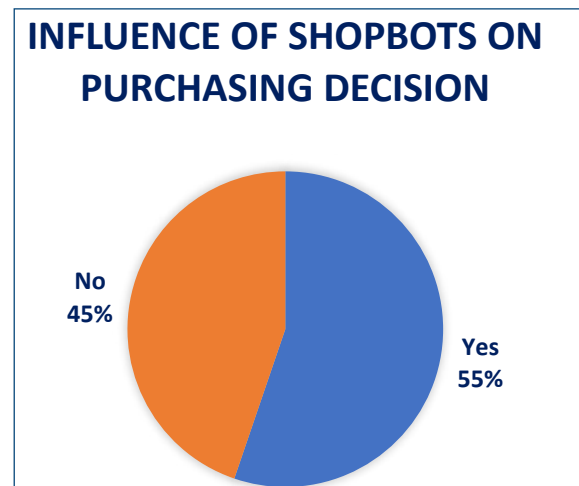


Fig. 13

The above depicts the Influence of Shopbots on purchasing decision by respondents. About 55.2% stated that their decisions might change with the use of Shopbots and the remaining respondents 44.8% has stated that their decisions might not change with the use of Shopbots. The majority 55.2% of the respondent have stated that their decisions might change with the use of Shopbots.

Factors Affecting the Respondents Purchasing Decision

(rank 1,2,3,4,5) [1=Brand loyalty, 2=Price and discounts, 3=Convenience, 4=Fashion trends, 5=Customer support system].

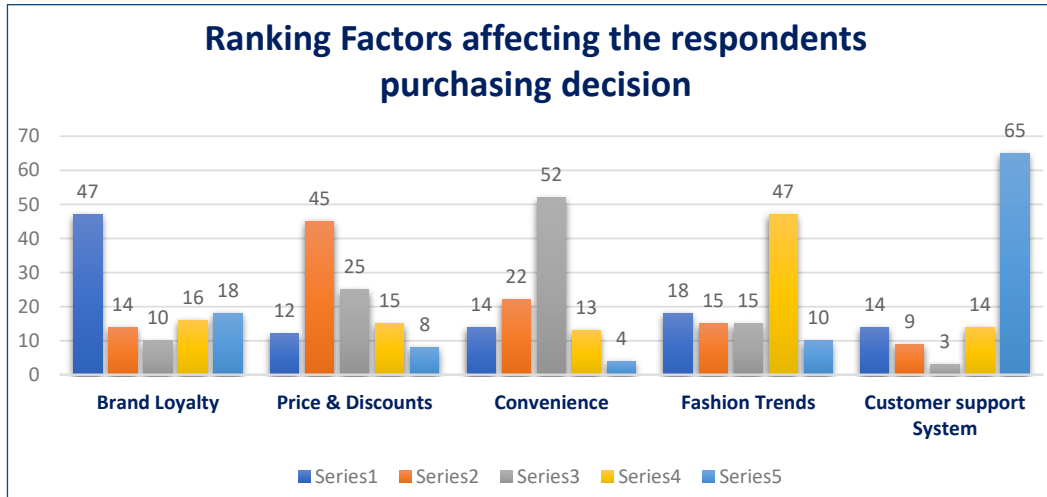


Fig. 14

The above graph illustrates the factors affecting the purchasing decisions by respondents who took part in the study. The respondents have ranked factors from 1 to 5, that is, 1) being the brand loyalty, 2) being the price & discounts, 3) being the convenience, 4) being the fashion trends and 5) being the customer support system. When it comes to brand loyalty 47 ranked it as 1st which is a major factor. Hence the brand is the major factor.

43.8% feels that Shopbots does not show where the products are cheaply available. The majority 56.2% of the people feels that Shopbots just show where the products are cheaply available.

Respondents Feeling on Whether Shopbots just Shows where the Product is Economically Available

Respondents Considerations on What Shopbots Look before Making Decision

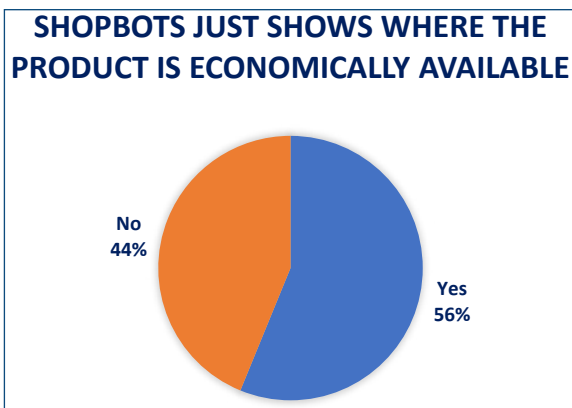


Fig. 15

The above describes the feeling on whether Shopbots just shows where the product is cheaply available. About 56.2% feels that Shopbots just show where the products are cheaply available and the remaining respondents

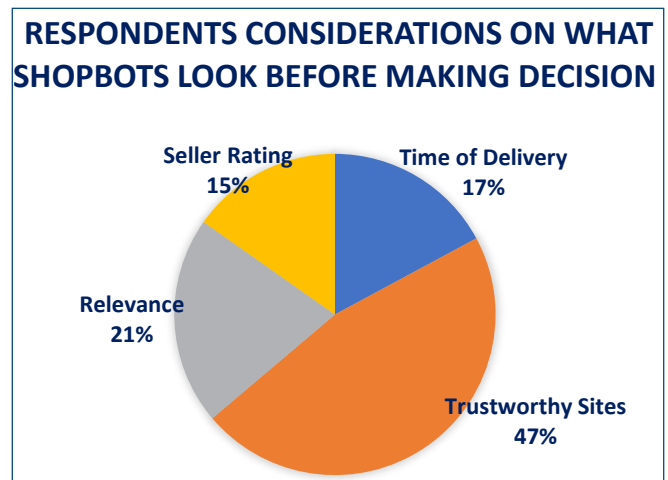


Fig. 16

The above portrays the sensitivity of respondents on what Shopbots look before giving the results. Nearly 17.1% opts in time of delivery, about 46.7% chooses in trustworthy sites, about 21% chooses in relevance and the remaining respondents 15.2% opt in seller ratings. The majority of the people 46.7% opine Shopbots look for trustworthy sites while giving the result.

Basis on Products Purchased by Respondents from E-Market

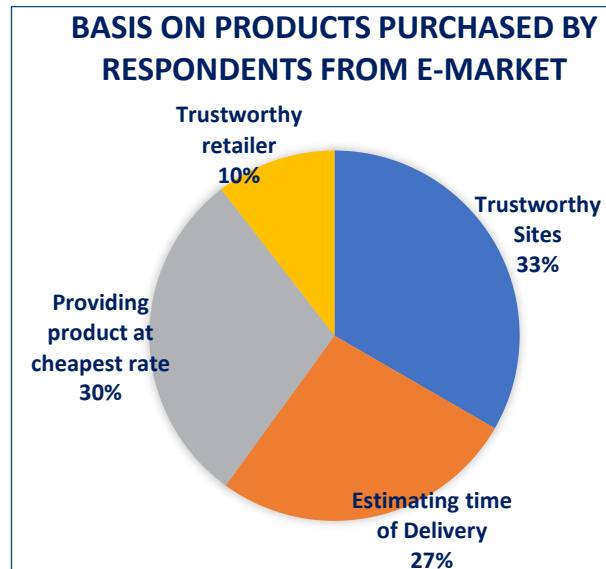


Fig. 17

The above illustrates the products purchased by respondents from E-markets, about 33.3% opts in trustworthy sites. Nearly 26.7% chooses in estimating time of delivery. Around 29.5% chooses in providing

product at cheapest rate and the remaining respondents 10.5% opts in trustworthy retailer. The majority of the people 33.3% have used Shopbots to access trustworthy sites.

Explanatory Analysis

Table 1

<i>Statistics</i>					
	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
Kindly state your opinion for each statement as: I use shopbots for online purchase.	105	1	5	2.54	1.135
Kindly state your opinion for each statement as: Shopbots have helped me in my buying decision.	105	1	5	2.87	1.057
Kindly state your opinion for each statement as: Shopbots are highly pressurising retailers in their buying decisions.	105	1	5	2.87	.910
Kindly state your opinion for each statement as: Shopbots reflects availability of products at low rates.	105	1	5	3.17	1.096
Kindly state your opinion for each statement as: Brand loyalty overcomes the weightage of price for certain segment of people.	105	1	5	3.14	1.069
Kindly state your opinion for each statement as: I am aware about the use of shopbots.	105	1	5	3.03	1.023
Kindly state your opinion for each statement as: Shopbots are making it easy for customers who are price oriented.	105	1	5	3.09	1.011
Kindly state your opinion for each statement as: Retailers are providing money for shopbots so that their product gets featured i.e., the shopbots are biased.	105	1	5	3.04	.940
Valid N (listwise)	105				

The above Table 1, the highest mean value is 3.17 that to for “Shopbots reflects availability of products at low rates”. Secondly it is 3.14 that is for “Brand loyalty overcomes the weightage of price for certain segment of people”.

Cross Tabulation

Relationship between Age and Awareness of the Shopbots

Table 2

		Awareness about Shopbots		Total
		Yes	No	
Age:	18 - 25	31	27	58
	26 - 35	11	12	23
	36 - 45	11	8	19
	>45	1	4	5
Total		54	51	105

The Table 2 above indicates the awareness level of the respondents about Shopbots with respect to the age of the respondents. A total of 58 respondents out of 105 respondents were between the age group of 18–25 out of which 31 respondents were aware and 27 were not aware about Shopbots. The next age group 26–35 had 23 respondents, out of which 11 were aware and 12 were not aware. The age group of 36–45 had 19 respondents, out of 11 were aware and 8 were not aware. The last age group

Table 4: Relationship between Gender and Awareness of the Shopbots

		Awareness about Shopbots		Total
		Yes	No	
Gender:	Male	27	28	55
	Female	27	23	50
Total		54	51	105

The Table 4 above indicates the awareness level of the respondents about Shopbots with respect to the gender of respondents. A total of 55 respondents out of 105 respondents were males, out of which 27 respondents were aware and 28 were not aware about Shopbots. The

of above 45 Years had 1 respondent who was aware and 4 were not aware.

H₀: Null Hypothesis establishes that age do not have correlation on the awareness of Shopbots.

H₁: Hypothesis one establishes that age has correlation on the awareness of Shopbots.

Table 3: Difference between the Observed Value and the Expected Value

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.509 ^a	3	.474
Likelihood Ratio	2.637	3	.451
Linear-by-Linear Association	.424	1	.515
N of Valid Cases	105		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 2.43.

The Table 3 above, here with the sig value being 0.474 which is more than 0.05 sufficient proofs to accept the null hypothesis. Age group has no significance when it comes to the awareness of Shopbots. With cross tabulation we can figure out that the age group of 18–25 has the highest awareness when it comes to Shopbots. This states that respondents’ age has no important relationship on awareness of Shopbots. The above analysis proves that if the age of the respondent changes it has no effect on awareness of Shopbots.

remaining 50 respondents were females, out of which 27 were aware and 23 were not aware.

H₀: Gender does not have association on awareness of Shopbots.

H₁: Gender does have association on awareness of Shopbots.

Table 5: Difference between the Observed Value and the Expected Value

	Value	Df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.253 ^a	1	.615		
Continuity Correction	.094	1	.759		
Likelihood Ratio	.253	1	.615		
Fisher's Exact Test				.697	.379
Linear-by-Linear Association	.250	1	.617		
N of Valid Cases	105				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 24.29.

b. Computed only for a 2x2 table.

Here with the significance value being 0.615 that is higher than 0.05 is sufficient proof to accept the null hypothesis. Hence derived, the respondents' gender does not have association with the awareness of Shopbots. Above analysis proves that if the gender of the respondent changes it has no effect on awareness of Shopbots.

Table 6: Relationship between Occupation and Awareness of Shopbots

		Awareness about Shopbots		Total
		Yes	No	
Occupation:	Self-employed	3	5	8
	Employed	17	11	28
	Under employed/ Student	34	33	67
	Others	0	2	2
Total		54	51	105

The Table 6 above indicates the awareness level of the respondents about Shopbots with respect to the occupation of the respondents. Eight respondents out of 105 respondents were Self-employed out of which 3 respondents were aware and 5 were not aware about Shopbots. The occupation of employed had 28 respondents, out of which 17 were aware and 11 were not aware. The underemployed/student category had 67 respondents, out of 34 were aware and 33 were not aware. Others had 2 respondents and both of them were not aware of Shopbots.

H₀: Respondents Occupation does not have association on the awareness of Shopbots.

H₁: Respondents Occupation has association on the awareness of Shopbots

Table 7: Difference between the Observed Value and the Expected Value

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.718 ^a	3	.294
Likelihood Ratio	4.503	3	.212
Linear-by-Linear Association	.172	1	.678
N of Valid Cases	105		

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .97

The above Table 7, here with the significance value being 0.294 that is higher than 0.05 is sufficient proof to accept the null hypothesis. Hence, it is derived that the respondents' occupation has no significant relationship with the awareness of Shopbots. The above analysis proves that if the occupation of the respondent has no effect on awareness of Shopbots.

Correlation

Relationship of the Respondent's Gender and Minimal Change in Price

H₀: Purchasing behaviour of gender does not have a relationship on price variation.

H₁: Purchasing behaviour of gender have a relationship on price variation.

Table 8

<i>Correlations</i>			
		<i>Gender:</i>	<i>A Minimal Price Variation of Rs100 - Rs300 in a Different Site Does Affect Your Buying Decision</i>
Gender:	Pearson Correlation	1	-.200*
	Sig. (1-tailed)		.020
	N	105	105
A minimal price variation of Rs100 - Rs300 in a different site does affect your buying decision.	Pearson Correlation	-.200*	1
	Sig. (1-tailed)	.020	
	N	105	105

* Correlation is significant at the 0.05 level (1-tailed).

Above Table shows a significance value of .020 is lesser compared to 0.05 therefore accept the substitute hypothesis and discard null hypothesis. Hence, we could prove that there is a substantial association between the minimal price variation and gender. So, the purchase behaviour of gender has a significant relationship with the price variation. If there is a change in purchasing behaviour of the gender then it will affect the price variation.

Relationship between Annual Income and Frequency of Online Purchasing

H_0 : Respondents Annual income does not have an influence on the frequency of online purchasing.

H_1 : Respondents Annual income influences the frequency of online purchasing.

Table 9

<i>Correlations</i>			
		<i>What is your current annual income?</i>	<i>How frequently do you purchase from online Platform?</i>
What is your current annual income?	Pearson Correlation	1	-.111
	Sig. (1-tailed)		.130
	N	105	105
How frequently do you purchase from online Platform?	Pearson Correlation	-.111	1
	Sig. (1-tailed)	.130	
	N	105	105

The Table 9 above, with a significance value of 0.130 which is more compared to 0.05 hence accept null hypothesis could establish that there is no relationship with annual income and frequency of purchase from online market. So the annual income of the respondent has no significant relationship with the frequency of online purchasing. If the annual income of the respondent changes it has no effect on the frequency of online purchasing.

Relationship between Awareness of Shop Bots and Frequency of using Shopbots for Purchase

H_0 : Awareness of the shop bots does not have a relationship with the frequency of using Shopbots for online purchase.

H_1 : Awareness of the Shopbots has a relationship with the frequency of using Shopbots for online purchase.

Table 10

<i>Correlations</i>			
		<i>Are You Aware of Shopbots?</i>	<i>How Often Do You Use Shopbots for Your Purchase?</i>
Are you aware of shopbots?	Pearson Correlation	1	.562**
	Sig. (1-tailed)		.000
	N	105	105
How frequently you use shopbots for your purchase?	Pearson Correlation	.562**	1
	Sig. (1-tailed)	.000	
	N	105	105

** Correlation is significant at the 0.01 level (1-tailed).

From tabulation, with significance value of 0.000 which is less than 0.05 therefore null hypotheses could not be considered. We could prove significant relationship between the awareness of Shopbots and frequency of usage of Shopbots for your purchase. If the awareness is more or less then it will affect the frequency of using Shopbots for online purchase.

Summary of Findings

The group of respondents aged between 18 and 25 years constitute 55.2%, this group's adoption and usage of online Shopbots while considering the psychological demography.

An increase in the online shopping behaviour has resulted in the rise online Shopbots usage due to which could analyses amount spend on shopping per month by the majority 82.9% of the respondents were from the category of twice a month purchasers.

The majority 53.3% of the people spend Rs.1001–Rs.5000 for shopping per month.

The majority 36.2% of the people purchase Apparels from E-market.

The majority 43.8% of the people opts in for online shopping due to discount offers. Nowadays most of the people are shifting from traditional shopping to online shopping; it might help the customer with ease of use, convenience and wide options for the products.

The majority 81.9% of the people have stated that minimum price variation in a product will change their buying decision, which has to be considered by marketers.

The Study finds that majority 56.2% of the people sense that Shopbots just display where the products are inexpensively available.

About 55.2% of people feel that their decisions might change with the use of Shopbots.

In this study it was derived that the occupation of the respondent has no significant relationship with the awareness of Shopbots.

Suggestions

- This study portray that the increase in use, awareness and adoption of Shopbots by the customers. This research also helps the ventures which are associated with the Shopbots as it helps them in determining the various sales promotional tools. And it also helps in planning the future according to the technologies involved by forecasting the changes.
- This study also helps to analyses the customers' needs, wants and how their purchasing decision is affected by the Shopbots.
- Through this study we came to know that how the demographic factors and rise in demand has changed the minds of the customers towards online shopping.
- This study is beneficial for both the customers and the retailers as they can recognise the scope of Shopbots which are used by the retailers for various promotional activities and by the customers that helps them to choose the best products at lower prices across India.

Conclusion

We could say that the future of Shopbots is very high, nowadays most of the people prefer to purchase online. After making analysis through primary data certain aspects regarding the Shopbots were found that most of

the people do not use Shopbots as they are not aware of it. Even though some people are aware of Shopbots they are only using it as a locator from which they can find cheaper products and they are not aware of the Artificial Intelligence associated with it and also it is used only when they make any expensive purchases. Through this study we came to know that most the people are price sensitive and slight variations in the price may lead to a change in their purchasing decision. Shopbots have an Impact on the customers purchase decision but only to a limited extend because of lack of familiarity of Shopbots among the customers.

We could conclude that Shopbots are being influenced by the people in a positive way and the people are adopting it while making a purchase decision but at lower rate in India. The respondents between age group of 18–25 years were in majority when it came to the adoption and usage of online Shopbots while considering the psychological demography. An increase in the online shopping behaviour has resulted in the rise of online Shopbots usage. Nowadays most of the people are shifting from traditional shopping to online shopping as it helps the customer with ease of use, convenience and wide options for the products and from all the above aspects we can conclude that Shopbots have a positive influence on the customers and they are adopting it practically. If the customers try to understand the uses and importance of Shopbots, they will be having a remarkable place in online shopping in the future.

References

- Passyn, K. A., Diriker, M., & Settle, R. B. (2013). Price comparison, price competition, and the effects of shopbots. *Journal of Business & Economics Research (JBER)*, 11(9), 401.
- Smith, M. D. (2002). The impact of shopbots on electronic markets. *Journal of the Academy of Marketing Science*, 30(4), 446-454.
- Allen, G., & Wu, J. (2010). How well do shopbots represent online markets? A study of shop bots' vendor coverage strategy. *European Journal of Information Systems*, 19(3), 257-272.
- Allen, G., & Wu, J. (2010, June). *European Journal of Information Systems; Abingdon*, 19(3), 257-272.
- Kennington, C., Jeanne, H., & Rakowska, A. (1996). Consumer selection criteria for banks in Poland. *International Journal of Bank Marketing*, 14(4), 12-21.
- Zhang, J. J., & Bing, J. (2007). IDEAS Working Paper Series from RePEc, St. Louis.
- Garfinkel, R., Gopal, R., Pathak, B., Yin, F. (2008). *Decision Support Systems*, 46(1), 61. Amsterdam.
- Drechsler, W., & Natter, M. (2011, May). Do price charts provided by online shopbots influence price expectations and purchase timing decisions? *Journal of Interactive Marketing*, 25(2), 95-109.
- Jacso, P. (1998, June/August). Online. *Medford*, 22(4), 14-20.
- Betts, M. (2001). *MIT Sloan Management Review*, 42(2), 9. Cambridge.
- Chen, Y., & Sudhir, K. (2002). IDEAS Working Paper Series from RePEc. St. Louis.
- Hertweck, B. M. (2005). Virginia Polytechnic Institute and State University, ProQuest Dissertations Publishing, 3255310.
- Wan, Y., & Fasli, M. (n.d.). Journal of electronic commerce research, suppl. Special Issue: Comparison-shopping and related. *Long Beach*, 11(3), 175-177.
- Montgomery, A. L., Hosanagar, K., Krishnan, R., Clay, K. B. (2004, February). *Management Science*, 50(2), 189-206. Linthicum.
- Gentry, L., & Calantone, R. (2002, November). *Psychology & Marketing*, 19(11), 945-956. Hoboken.
- Smith, M., & Brynjolfsson, E. (2001). Consumer decision-making at an internet shopbot: Brand still matters. *The Journal of Industrial Economics*, 49(4), 541-558. Retrieved November 17, 2020.
- Tang, Z., Smith, M. D., & Montgomery, A. (2010). The impact of shopbot use on prices and price dispersion: Evidence from online book retailing. *International Journal of Industrial Organization*, 28(6), 579-590.
- O'connor, G. C., & O'Keefe, R. (2000). The internet for a new marketplace: Implications for consumer behavior and marketing management. In M. Shaw, R. Blanning, T. Strader & A. Whinston (Eds.), *Handbook on Electronic Commerce* (pp. 123-146). SpringerVerlag.
- Brynjolfsson, E., & Smith, M. D. (2001). The great equalizer? Consumer choice behavior at internet shopbots.
- Bakos, J. Y. (1997). Reducing buyer search costs: Implications for electronic marketplaces. *Management Science*, 43(12), 1676-1692.
- Zhang, J., & Jing, B. (2011, January). The impacts of shopbots on online consumer search. In *2011 44th Hawaii International Conference on System Sciences* (pp. 1-10). IEEE.

- Greenwald, A. R., & Kephart, J. O. (1999, July). Shopbots and pricebots. In *International Workshop on Agent-Mediated Electronic Commerce* (pp. 1-23). Springer, Berlin, Heidelberg.
- Dutta, A., & Roy, R. (2002). Internet diffusion in developing countries. In *Business Modelling* (pp. 389-400). Springer, Boston, MA.
- Victor, V., Joy Thoppan, J., Jeyakumar Nathan, R., & Farkas Maria, F. (2018). Factors influencing consumer behavior and prospective purchase decisions in a dynamic pricing environment—an exploratory factor analysis approach. *Social Sciences*, 7(9), 153.
- Punj, G. (2012). Consumer decision making on the web: A theoretical analysis and research guidelines. *Psychology & Marketing*, 29(10), 791-803.
- Chen, Y., & Sudhir, K. (2004). When shopbots meet emails: Implications for price competition on the Internet. *Quantitative Marketing and Economics*, 2(3), 233-255.
- Bakos, J. Y. (1991). A strategic analysis of electronic marketplaces. *MIS Quarterly*, 295-310.
- Häubl, G., & Trifts, V. (2000). Consumer decision making in online shopping environments: The effects of interactive decision aids. *Marketing Science*, 19(1), 4-21.