

## IMPACT OF SHOPBOTS ON CONSUMERS' BUYING BEHAVIOUR IN DIGITAL MARKETS: AN EXPLORATORY APPROACH

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### ABSTRACT

With the advent of digitalization the world has seen a revolutionary change in the practices, strategies and technologies adopted by the markets. 'Shopping robots' also known as 'Shopbots' is yet another addition to the above mentioned. Most of the customers' purchasing decision is based on their brand loyalty and most of them prefer online shopping over traditional shopping. Even though some people are aware of shopbots, they use it only as a locator through which cheaper products could be found or when any expensive purchases are to be made. There is less awareness about the artificial intelligence associated with shopbots and its usage. This study is exploratory in nature and is conducted with the aim to study on the impact of shopbots on consumer purchase behaviour in digital markets. The research adopts an exploratory approach. Both primary and secondary data are used. The information gathered includes the respondents' demographics and information on their level of knowledge on shopbots, the average amount spent, purchasing frequency, and shopping preferences through a survey of a sample population in Bangalore City. The primary data collected via Google forms was coded and entered into the Excel sheets. There was a total of 105 valid respondents. After that, the coded data was exported to SPSS for review. Chi square, Cross tab, Correlation, Frequency and Distribution statistics were the test in SPSS and the Weighted Average in Microsoft Excel were used to test the hypothesis. The output was interpreted, and the results were represented using graphs and tables. This research study will be beneficial to identify the upliftment that needs to be done by the online retailers in the process of developing of shopbots to attract more customers. This study focuses on understanding the socio-psychological profile of the demographics segment, the level of adoption & awareness of shop bots in the Indian online market and aims to find out whether shopbots have any impact on online shopping behavior of the consumer.

**Keywords:** *Shopbots, Digital Markets, Consumer Buying Behaviour, Online Shopping, Artificial Intelligence.*

### 1. Introduction

It has been proposed that digital markets will be more efficient than traditional markets. 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 alternatives. To help the consumers in this situation, several information service providers have made aggregation of information for product, one of their main services. Such services are generally termed "shopbots". It has been suggested that one of the reasons why digital markets

would be more competitive is the availability of shopbots. This is mainly explained by more rational consumer buying behavior and consumer loyalty. With the advent of shopbots, prospective buyers can now see the prices of many online sellers for almost no cost. Shopbots, also known as price comparison engines, are automated agents that ask a large number of online vendors to collect and collate product and service details for a specific product. Shopbots are currently programmed to compile and view prices from major online retailers because it is easier for them to obtain and compare price information rather than other attributes such as service quality, reliability, and so on. (Harrington and Leahey, 2006; Smith, 2002). Shopbots can be defined as online search which enables the customers to compare the price and features of different products by different vendors easily. It is the short form of shopping robot which is an intelligent software agent which enables search for particular product over various online sites. It enables an easy accessibility towards the product information's for the customers and helps the customers to have easy access to the information regarding the products. Shopbots will help the customers to reduce the search cost and it also reduces the vendor's 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. It also helps the customers with recommendation of previously viewed products. When online businesses expand, customers may have more options for stores to shop at, making it more difficult for them to choose the best one. As a result, customers who have a particular item in mind must also conduct extensive research in order to locate a store that offers a reasonable price and acceptable product and service quality. Expect to find a better mix of price and quality deals as a buyer performs further searches. Searching for online retailers, on the other hand, takes time and is often expensive.

### **1.1 Problem Statement**

This study explains about the adoption and usage of shopbots in the current scenario. 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. Shop bots are intelligent software that is helpful in comparing the price of a particular products in different site. So, this helps the customers to choose the best product at a cheaper price. Youths, in particular, are highly responsive to how the overall price is distributed between item price, shipping cost, and tax, as well as the ordinal ranking of retailer products in terms of price. It's found that youth use brand as a proxy for a retailer's credibility with regard to non-contractible aspects of the product bundle such as shipping time. In each case, it accurately predicts consumer behaviour out of sample, suggesting that analyses effectively capture relevant aspects of consumer choice processes.

This study is mainly conducted in order to find out the impacts of shopbots on consumers buying behavior 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 behavior of the consumer specific to youth, to analyze the factors that drives youth in using shopbots and to find out whether the shop bots are biased towards the online retailers.

## 2. Literature Review

O'Connor, Gina Colarelli and Robert O' Keefe (2000) "The Internet for a New Marketplace: Implications for Consumer Behavior and Marketing Management, in" Handbook on Electronic Commerce. Michael Shaw, Robert Blanning, Troy Strader and Andrew Whinston eds: Springer Verlag, pp. pp. 123-146. It explores how traditional marketing management practice and marketing strategy development will be affected by the rising tide of interactive technologies. The emphasis on customer behaviour and marketing management, and how the two can interact in this modern media. Clear trends, powered by information technology that connects buyers and sellers directly, are emerging. Centered on the buyer behaviour, drawing insights to create a business that differ from conventional marketing methods. The need of a user is aroused or stimulated in a number of ways. It looks for information on alternative solutions to his query, compares competing brands using a decision rule, picks one, buys it, and then uses and tests it for potential buying decisions. A systematic consideration of the main factors of this ensures that users will dismiss classic avenues of behaviour and replace them with modern approaches to the technology of the Internet. Zhulei Tang, Michael D. Smith, Alan Montgomery, The impact of shopbot use on prices and price dispersion: Evidence from online book retailing, International Journal of Industrial Organization, Volume 28, Issue 6, 2010, Pages 579-590. It states that Internet price search tools, especially shopbots, have reduced search costs for price and product characteristics for consumers. 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" says, Although the item submitted for price comparison could be similar, if it were the suppliers are not likely to be so, a consumer aware of price dispersion would almost certainly be aware of price dispersion choose the lowest price offering. Prices would be "rationalized," and price dispersion would be minimized or eliminated (Stahl, 1989). While the importance of the vendor has been realized in the instore environment, the factors that distinguish among online vendors are much less distinctive. Consumers who shop around a lot are less price sensitive, according to previous studies, indicating that they place a higher value on retail differentiation in terms of delivery and reliability.

In this literature Lubna Javed "British Journal of Management December 2013". Online Marketing through Consumer: A Study of Effectiveness of Various Tools. vol.1, No.4, pp.11-19, December 2013 states that, in the present period 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's regarding the products and services has become much faster in this era and it has also enabled several innovations. marketers can use this online market as tool to market their products without any geographical constraints. It also empowers the customers by providing variety of products along with all the characteristics, this enables the customers to satisfy their needs and wants without much difficulties. Online marketing has the ability to influence the consumer's behavior 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 markets it by sharing the product quality, features and other characteristic s through certain online forums and social communities`. Icono cast (16th Dec,1998) mentioned that viral marketing is the new language in online marketing.

Brynjolfsson, E., & Smith, M. D. (2001). The great equalizer? Consumer choice behavior at Internet shopbots. Consumer Choice Behavior at Internet Shopbots (October 2001). States that, when price is an important determinant of customer choice, its found that, even among shopbot consumers, branded retailers and retailers, a consumer visited previously hold significant price

advantages in head-to-head price comparisons. In addition, clients are very sensitive to how the overall price is shared between the price of the item, the cost of delivery, and tax, and are also very sensitive to the ordinary price ranking of retailer offerings. It also finds that consumers use brand as a proxy for a retailer's credibility with regard to non-contractible aspects of the product bundle such as shipping time. In each case models in this literature accurately predict consumer behaviour out of sample, suggesting that our analyses effectively capture relevant aspects of consumer choice processes. As shopbots provide Internet researchers with a unique opportunity to analyze actual consumer behaviour in Internet markets.

In the literature review, Greenwald A.R., Kephart J.O. (2000) Shopbots and Pricebots. In: Moukas A., Ygge F., Sierra C. (eds) Agent Mediated Electronic Commerce II. AMEC 1999. Lecture Notes in Computer Science, vol 1788. Springer, Berlin, Heidelberg. Says, Shopbots are software agents that collect and collate information about the price and quality of consumer products and services automatically from multiple online vendors. Shopbots are increasingly rising in number and complexity, helping more and more customers reduce spending and optimize satisfaction. Sellers are expected to rely on Pricebots, automated agents that use price-setting algorithms in an effort to maximize profits, in response to this trend. This article paper proposes and analyses a basic economic model intended to describe some of the possible impacts of the proliferation of shopbots and price bots.

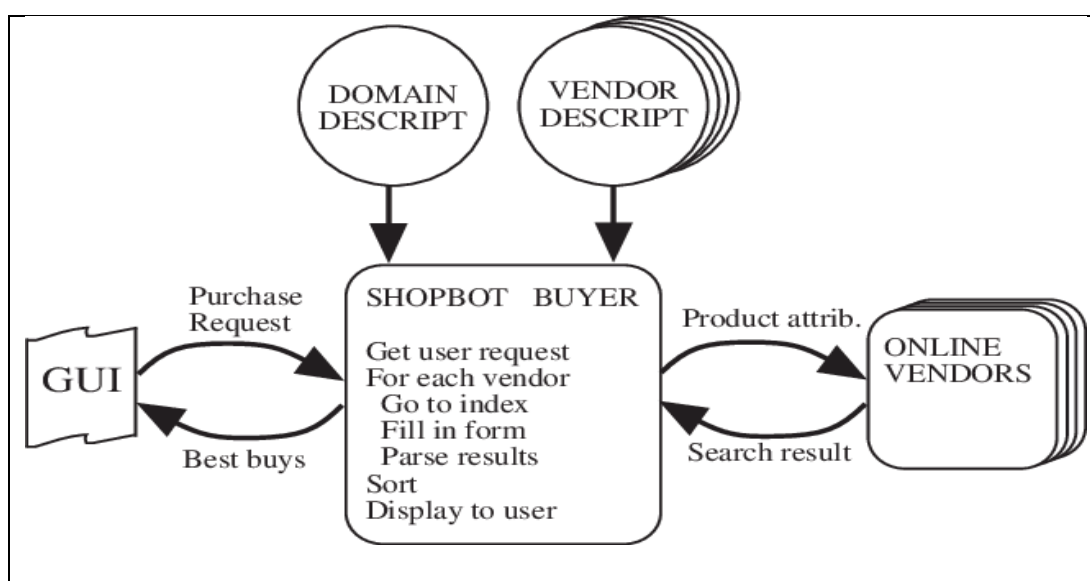
Victor, V., Joy Thoppan, J., Jeyakumar Nathan, R., & Farkas Maria, F. (2018). During the third industrial revolution of the late 20th century, the rapid developments in information and communication technology marked the start of a new age in the retail sector with the advent of e-commerce. Industry 4.0 experienced the dawn of the new century, revolutionizing all aspects of online industry and bringing in new possibilities and possibilities. Despite advancements in technology, it still remains a very complex challenge to assess the correct pricing on online sales platforms. Online sellers have been able to make real-time price changes of high magnitude and proximity through the use of big data technology. However, with growing understanding among consumers about modern pricing techniques, when subjected to competitive pricing scenarios, it is important to analyze probable changes in customer behaviour. Via an exploratory factor analysis approach, this research examined the variables that affect customer behaviour and their prospective online purchasing decisions in a competitive pricing context.

Punj, G. (2012). Consumer decision making on the web: A theoretical analysis and research guidelines. *Psychology & Marketing*, 29(10), 791-803. This paper suggests that digital shopping customers have the ability to make better quality decisions when shopping on the internet but it is an unresolved problem if most customers does not realize such potential. This research therefore demonstrates how certain characteristics of electronic environments have a beneficial impact on consumers' ability to make better decisions and to recognize strategies for information processing that would enable consumers to make better quality decisions when shopping online. In order to classify variables that theoretically affect decision quality in electronic settings, a cross-disciplinary theoretical review is carried out based on constructs taken from economics (e.g. time costs), computing (e.g., advice agents), and psychology (e.g., decision strategies). From a theoretical point of view, the study is significant because it discusses an important aspect of online consumer decision-making, namely the effect of the electronic world on consumers' capabilities. From a managerial and public policy point of view, it is critical because shoppers' ability to make better quality decisions when shopping online is directly linked to improving market efficiency and improving consumer welfare in electronic markets.

## 2.1 Significant of Study

Shopbots can be defined as online search which enables the customers to compare the price and features of different products 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. This study helps to identify the major innovations that need to be done by the online retailers in shopbots to attract more customers. This study is mainly conducted in order to find out the impacts of shopbot on consumers buying behavior 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 on online shopping behavior of the consumer, to analyze the factors that drives people in using shopbots and to find out whether the shop bots are biased towards the online retailers.

Process of Shopbots Guiding the Customers in Decision Making



Source: Mike Perkowitz, Research gate Figure 1.



Source: Sample screen from pricewatch.com Figure 2.

Shopbots are online services that offer single-click access to pricing and product details from a multitude of rival retailers. They effectively reduce the search costs for comprehensive price information by a significant factor, often reducing the effort required compared to traditional phone calls to retailers by at least 30 times.

These shopbots gather and present a range of product attributes, offering concise summaries for both prominent and less-known retailers. Additionally, they typically arrange these retailers in order of relevance to the shopper's specific preferences, which may include factors such as price or shipping time.

### 3. Methodology

The research adopts an exploratory approach. Both primary and secondary data are used. The information gathered includes the respondents' demographics and information on their level of knowledge on shopbots, the average amount spent, purchasing frequency, and shopping preferences through a survey of a sample population in Bangalore City. Judgmental sampling technique was adopted. The primary data collected via Google forms was coded and entered into the Excel sheets. There was a total of 105 valid respondents. After that, the coded data was exported to SPSS for review. Chi square, Cross tab, Correlation, Frequency and Distribution statistics were the test in SPSS and the Weighted Average in Microsoft Excel were used to test the hypothesis. The output was interpreted, and the results were represented using graphs and tables.

### 4. Data Analysis and Interpretation of Results

#### 4.1 Demographics:

**Age of Respondents:**

Age	Frequency	Percent	Cumulative Percent
18 - 25	58	55.2	55.2
26 - 35	23	21.9	77.1
36 - 45	19	18.1	95.2
>45	5	4.8	100.0
Total	105	100.0	

**Gender of Respondents:**

	Frequency	Percent	Cumulative Percentage
Male	55	52.4	52.4
Female	50	47.6	100.0
Total	105	100.0	

**Occupation of Respondents:**

	Frequency	Percent	Cumulative
Self-employed	8	7.6	7.6
Employed	28	26.7	34.3
Student	67	63.8	98.1
Others	2	1.9	100.0
Total	105	100.0	

**Current Annual Income of respondents:**

	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Nil	61	58.1	58.1
< ₹ 1,00,000	9	8.6	66.7
₹ 1,00,000 - ₹ 2,00,000	10	9.5	76.2
₹ 3,00,000 - ₹ 5,00,000	16	15.2	91.4
> ₹ 5,00,000	9	8.6	100.0
	105	100.0	

**Awareness:**

**Type of shopping preferred by the respondents:**

	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Online	52	49.5	49.5
Retail Store	53	50.5	100.0
Total	105	100.5	

**Frequency of online purchase:**

	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Daily	1	1.0	1.0
Weekly	12	11.4	12.4
Twice a month	87	82.9	95.2
Never	5	4.8	100.0
Total	105	100	

**Amount spend on shopping per month:**

	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
0 – 1,000	36	34.3	34.3
1,001 – 5,000	56	53.3	87.6
5,001 – 10,000	9	8.6	96.2
>10,001	4	3.8	100.0

**Products purchased by respondents from E-market:**

	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
FMCG (Fast Moving Consumer Goods)	23	21.9	21.9
FMCD (Fast Moving Consumer Durables)	10	9.5	31.4
Apparels	38	36.2	67.6
Electronic Gadgets	34	32.4	100.0
Total	105	100	

**Factors that drives for online purchase:**

	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Convenience	34	32.4	32.4

Discounts	46	43.8	76.2
Door Delivery	17	16.2	92.4
Return Policies	8	7.6	100.0
Total	105	100.0	

**Analysis**

**Awareness of shop bots by the respondents:**

	Frequency	Percent	Cumulative Percent
Yes	54	51.4	51.4
No	51	48.6	100.0
Total	105	100.0	

**Frequency of using shop bots by the respondents:**

	Frequency	Percent	Cumulative Percent
Every Purchase	2	1.9	1.9
Expensive Purchase	11	10.5	12.4
Rarely	47	44.8	57.1
Never	45	42.9	100
Total	105	100.0	

**Price variation influences on purchasing decisions:**

	Frequency	Percent	Cumulative Percent
Yes	86	81.9	81.9
No	19	18.1	100.0
Total	105	100.0	

**Influence of shopbots on purchasing decision of the respondents:**

	Frequency	Percent	Cumulative Percent
Yes	58	55.2	55.2
No	47	44.8	100.0
Total	105	100.0	

**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].

	1	2	3	4	5	6
Brand Loyalty	47	14	10	16	18	105
Price & Discounts	12	45	25	15	8	105
Convenience	14	22	52	13	4	105
Fashion Trends	18	15	15	47	10	105
Customer support System	14	9	3	14	65	105

The table above demonstrates the factors affecting the purchasing decisions by respondents who took part in the study. The respondents have ranked factors from 1 to 5, 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 respondents out

of the 105 respondents ranked it as 1.

**Respondents feeling on whether Shopbots just shows where the product is cheaply available:**

	Frequency	Percent	Cumulative Percent
Yes	59	56.2	56.2
No	46	43.8	100.0
Total	105	100.0	

**Respondents feeling on what shopbots look before giving the results:**

	Frequency	Percent	Cumulative Percent
Time of Delivery	18	17.1	17.1
Trustworthy Sites	49	46.7	63.8
Relevance	22	21.0	84.8
Seller Rating	16	15.2	100.0
Total	105	100.0	

**Products purchased by respondents from E-market:**

	Frequency	Percent	Cumulative Percent
Trustworthy Sites	35	33.3	33.3
Estimating time of Delivery	28	26.7	60.0
Providing product at cheapest rate	31	29.5	89.5
Trustworthy retailer	11	10.5	100
Total	105	100	

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
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 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.”

#### 4.2 Cross Tabulation:

##### Relationship between age and awareness of the shopbots.

		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

Table above indicates the awareness level of the respondents about shopbots with respect to the age of the respondents. 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 of above 45 Years had 1 respondent who was aware and 4 were not aware.

H<sub>0</sub>: Age of the respondents does not have a relationship with the awareness of shopbots.

H<sub>1</sub>: Age of the respondents have a relationship with the awareness of shopbots.

#### 4.3 Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.509 <sup>a</sup>	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 significance value being 0.474 which is higher than 0.05 there is sufficient evidence to accept the null hypothesis. We can say that the age group is 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 the age of the respondent has no significant relationship with the awareness of shopbots. The above analysis proves that if the age of the respondent changes it has no effect on awareness of shopbots.

**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 indicates the awareness level of the respondents about shopbots with respect to the gender of respondents. 55 respondents out of 105 respondents were Males, out of which 27 respondents were aware and 28 were not aware about shopbots. The remaining 50 respondents were Females, out of which 27 were aware and 23 were not aware.

H<sub>0</sub>: Gender of the respondents does not have a relationship with the awareness of shopbots.

H<sub>1</sub>: Gender of the respondents have a relationship with the awareness of shopbots.

#### 4.4 Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.253 <sup>a</sup>	1	.615		
Continuity Correction <sup>b</sup>	.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 sig value being 0.615 that is higher than 0.05 there is sufficient evidence to accept the null hypothesis. So, it is derived that the gender of the respondent has no significant relationship with the awareness of shopbots. The above analysis proves that if the gender of the respondent changes it has no effect on awareness of shopbots.

**Relationship between occupation and awareness of shopbots.**

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

The table indicates the awareness level of the respondents about shopbots with respect to the

occupation of the respondents. 8 respondents out of 105 respondents were Self-Employed out of which 3 respondents were aware and 5 were not aware about shopbots. The next Occupation of Employed had 28 respondents, out of which 17 were aware and 11 were not aware. The Student Category had 67 respondents, out of 34 were aware and 33 were not aware. The last category of Others had 2 respondents and both of them were not aware of Shopbots.

H<sub>0</sub>: Occupation of the respondents does not have a relationship on the awareness of shopbots.

H<sub>1</sub>: Occupation of the respondents have a relationship on the awareness of shopbots

<b>Chi-Square Tests</b>			
	<b>Value</b>	<b>df</b>	<b>Asymptotic Significance (2-sided)</b>
Pearson Chi-Square	3.718 <sup>a</sup>	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.

Here with the sig value being 0.294 that is higher than 0.05 there is sufficient evidence to accept the null hypothesis. So, it is derived that the occupation of the respondent has no significant relationship with the awareness of shopbots. The above analysis prove that if the occupation of the respondent has no effect on awareness of shopbots.

#### 4.5 Correlation:

##### Relationship of the respondent's gender and minimal change in price.

H<sub>0</sub>: Purchasing behavior of gender does not have a relationship on price variation

H<sub>1</sub>: Purchasing behavior of gender have a relationship on price variation

<b>Correlations</b>			
		<b>Gender:</b>	<b>A minimal price variation of Rs100 - Rs300 in a different site does affect your buying decision.</b>
<b>Gender:</b>	Pearson Correlation	1	-.200*
	Sig. (1-tailed)		.020
	N	105	105
<b>A minimal price variation of Rs100 - Rs300 in a different site does affect your buying decision.</b>	Pearson Correlation	-.200*	1
	Sig. (1-tailed)	.020	
	N	105	105

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

Significance value of .020 which is lesser than 0.05 meaning it is enough to reject the null hypothesis and accept the alternative hypothesis. We can then prove that there is a significant

relationship 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 behavior of the gender, then it will affect the price variation.

**Relationship between annual income and frequency of online purchasing.**

H<sub>0</sub>: Annual income of the respondents does not have an influence on the frequency of online purchasing

H<sub>1</sub>: Annual income of the respondents influences the frequency of online purchasing.

<b>Correlations</b>			
		<b>4) What is your current annual income?</b>	<b>6) How frequently do you purchase from online Platform?</b>
4) What is your current annual income?	Pearson Correlation	1	-.111
	Sig. (1-tailed)		.130
	N	105	105
6) How frequently do you purchase from online Platform?	Pearson Correlation	-.111	1
	Sig. (1-tailed)	.130	
	N	105	105

<b>Correlations</b>			
		<b>Are you aware of shopbots?</b>	<b>How often do you use shopbots for your purchase?</b>
Are you aware of shopbots?	Pearson Correlation	1	.562**
	Sig. (1-tailed)		.000
	N	105	105
How often do 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).

Significance value of .130 which is higher than 0.05 meaning it is enough to accept the null hypothesis. We can then prove that there is no significant relationship between the current 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<sub>0</sub>: Awareness of the shop bots does not have a relationship with the frequency of using shopbots for online purchase.

H<sub>1</sub>: Awareness of the shopbots have a relationship with the frequency of using shopbots for online purchase.

Significance value of .000 which is lesser than 0.05 meaning it is enough to reject the null hypothesis. We can then prove that there is a 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.

## 5. Conclusion

From various journals and articles, it can be said that the future of shopbots is very high, as 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 does 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 it is known 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.

It can be concluded 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 a developing country like India. The respondents who are between the age group of 18-25 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 behavior has resulted in a riser 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 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.

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