
A Comparative Study on the Online Purchase Pattern of Rural and Urban Consumers in the State of Haryana

Manisha Dalal

Assistant Professor in Commerce, Government College for Women, Jind, Haryana, India.

Received: 07 Oct 2025, Received in revised form: 04 Nov 2025, Accepted: 09 Nov 2025, Available online: 15 Nov 2025

Abstract— As we all know that today the whole world is in the grip of the internet and human life cannot be imagined without it. In today's time, through the internet, we can send your message to any corner of the world. Internet usage is not limited to communication but it is used for banking, education, e-commerce and online shopping. Online shopping refers to buying and selling goods and services using digital technologies. Digital technology is in addition to traditional retailing methods and is known for modern names like digital retailing, e-commerce, websites, online marketing. Online shopping is growing rapidly as a hobby of the public; it has become an important part of people's lives in today's time. The present study is comparative in nature entitled as: "A Comparative Study on the Online Purchase Pattern of Rural and Urban Consumers of the State of Haryana." and to explore consumer trust and attitudes towards online shopping in Haryana.

Keywords— digital technology, consumers, online shopping, purchase pattern.

I. INTRODUCTION

Actually, digital technology has brought a drastic change in consumer behaviour, consequently a number of studies deal with the e- buyer pattern of the suspect. In this changing scenario, we can study the e-pattern by asking questions about the buying choice, cause for making e-purchasing etc. Before we carry out e-shopping, an online consumer like an offline buyer will undergo knowledge investigation, need recognition, alternative assessment, and step to make the buyer and post buyer evaluation. If the results are of high quality, then the client will make an e-buyer. Some of these stages will also occur offline involving goodwill, alternative evaluation and lost purchase evaluation. In a few cases, the client may even purchase the product offline. Since this paper deals with the study of an online buyer pattern of the suspect, therefore, the first goal of this investigation is to make a difference between the e-buyer pattern of villagers and city consumers in Haryana. Chi - square test for freedom has been used since it is applied when there are two categories variable among single residents. Chi- square study has

been conducted at 5 percent and 1 percent level of advantage. Further, Cramer's 'V' has been used to confirm the results of the Chi- square test. We do not use phi but it is only appreciated for 2X2 tables. Cramer's 'V' is the most popular measure of nominal association which is based on Chi- square because it gives good morning from 0 to 1 regardless of table size.

II. REVIEW OF LITERATURE

>Kanwal, (2012) investigate the demographic profiles of e- digital consumers and non-digital consumers that why consumers adopt e-shopping or not adopting. In this regard, research data was collected from 400 respondents with the help of suspects and three cities were selected from Punjab state as: Jalandhar, Ludhiana and Amritsar. Chi- Square test and factor study was used and found that consumers mostly prefer e- shopping. Their company Website is also good for offering e-convenience instead of store shopping. They can be trusted with security. E-shopping is more convenient, because the consumers only have to use electronic means done electronically. However it is quite difficult to spare time for store shopping, only one thing negates

their attitude in the minds of consumers for e-shopping, they have to issue full credit card details on the website.

>Hemamalini, (2013) investigated, what is the attitude of online consumers towards different products? It was an empirical study in the Indian context that what kind of products sell the most in e-shopping? On the contrary, factors such as Product Involvement, Personal Selling, and Internet Awareness were taken in e-shopping; this investigation was done at Coimbatore on 125 e-shoppers and a factor study test was used in this. The effect of consumer's attitude towards e-shopping and the relationship between the elements of products and services was observed; but this investigation was limited to one product for each product category, so this research suggests that more products be involved so that elements could have an effect on consumer attitude.

>Thamizhvanan and Xavier, (2013) found in their investigation that e-security, a person's prior experience and Impulse shopping influences advantages on e-shopping decisions. This investigation found that men have more intent in e-shopping than women. This result was found from 95 trusted suspects surveyed online. Moreover, regression, ANOVA and factor study was used here. It suggested that representatives of all sections should be included in the research so that a more suitable sample could be found; but rather a large proportion of e-shoppers were involved here.

>Sahney et al. (2013) took a sample of 327 users using e-railway facilities. Look at factors like convenience etc. in e-shopping, what are their effects? To boost confidence online or can it affect E-shopping decisions? Investigation to find the reason and effect found that e-factors have a major impact in getting online ticket reservations for consumers in Indian context; but there is no advantage comparison with respect to gender here and such a difference has been found in the age group upon purchase. Likewise, a multiple regression study was used here to find out the causal effect in factors affecting consumers in the context of Indian consumers.

>Akman and Rehan, (2014) conducted a survey during an IT event of a sample of 230 professionals to study the associations among the different factors of individual level e-shopping. It was conducted by Akman and Rehan (2014). The server was tested with the help of the Chi-square method. This survey concluded that e-purchasing is influenced by age, income and level of education. In the study, it was mostly found that e-shopping influenced some professionals from the government sector because their average income was less than private entrepreneurs. The results of this study

also point that the percentage for the younger group of less than 30 years do higher e-purchasing than the older more than 30 years professionals; it was also found that medium and small size organisations of all sectors which found the resources according to the need of individuals alternatives and administrative factors

>Haq, (2014) made perception towards e-shopping by an important study of Indian consumers which shows that the factors age and gender have no effect on e-shopping but the factors like qualification and income impact on e-shopping as well as consumers, this survey resulted that some facilities like security, customer service and commitment made a positive impact on consumers, while e-shopping data or perception was collected with the help of 200 respondents from Hyderabad and Sikanderabad; the study was made by using the factor technique. This study can be verified by targeting big across segments of internet customers and more diverse random samples.

>Garbarino and Strahilevitz, (2004) in their study reported that there was an increase in e-shopping of women. Although men take more risks, if women are told about a site by a friend, then they show more trust and there is an increase in e-shopping of women more than men.

>Singh, (2014) in his analysis came to conclude how we can explain the relationship between online shopping motivations, information investigate and shopping ideas intentions creativity that are related to this content collected from 300 centres and shopping malls of Chandigarh, which is the capital city of Haryana. Here the factor studying was used to divide the whole content into Indian context; the study came to conclude that people adopting online shopping are more oriented that they like fun or enjoyment in a unique or different kind of mood, while online shopping utilitarian motivations like quick product info also affect the intention of online shopping.

>Srivastava, (2014) in his study got some knowledge about the customer satisfaction or aggregation in online shopping. The data was collected from 90 graduate students who were E-commerce users i.e. electronic commerce users. Here the factors and methods of the study all dividing the data were adopted for the contents. The results of the study showed that consumers say more importance of stress on offline retailing instead of online context. For the Indian consumer it was suggested that the retailer will have to maintain a balance between his online and offline plans to attract more and more customers.

III. RESEARCH GAP

As we take a look in the past, there are very few studies which are done to show the online purchasing behaviour of online shopping buyers in India. Therefore, there is a wide research gap in the marketing study of India because the research is bounded to rural areas. There is only a small amount of research work done on the consumers' attitude towards online shopping and consumers' nature of rural and urban areas related to online shopping in Pune city of Maharashtra but no research has been found in the context of Haryana.

IV. RESEARCH METHODOLOGY

All of us know that the research methodology is a collection of concepts or structural strategy of the research work so that the study could be managed. In other words, the research methodology consists of all investigational procedures, approaches, techniques and tests.

V. HYPOTHESIS OF THE STUDY

Ho: There is no significant difference in the online purchase pattern of rural and urban online consumers of Haryana.

VI. TARGETED POPULATION

The target population for this study is limited to 4 districts of Haryana, according to the Census of India-2011.

6.1. Selection of the Geographical Region:

The samples were selected from different regions of Haryana. Different regions were selected according to the literacy rate of urban and rural sectors from each selected city. The selected geographical regions are Kaithal, Hisar, Jind and Rohtak because these cities acquire the maximum area of rural population..

6.2 Sample Unit:

The respondents are chosen equally from each region of the selected cities as the above respondents from the population who have done online shopping were identified for the research objective. The sample units involve the address of the selected cities and villages in respect of their place of work or study. The respondents who didn't go for online shopping even once were excluded from the study.

6.3 Scaling Technique:

Some of the items of this section were self-framed and others were adapted from the research work made by R.B. Faldu (2013) and B.O. Baxi (2011).

This research includes the scaling techniques such as: descriptive and inferential statistics, frequency distribution, Chi-square test and Cramer's- V.

Ho: There is no significant difference in the online purchase pattern of rural and urban online consumers of Haryana.

Table: 1- Association of Time Spent on Internet with the Region of Consumers

Time Spent on Internet per week	Region			Chi-Square	P- Value
	Rural	Urban	Total		
0 - 5 hours	141	70	211	71.200	.000**
	64.09%	31.82%	47.95%		
6 - 10 hours	43	58	101		
	19.55%	26.36%	22.95%		
11 - 15 hours	18	12	30		
	8.18%	5.45%	6.82%		
16 - 20 hours	13	29	42		
	5.91%	13.18%	9.55%		
More than 20 hours	5	51	56		
	2.27%	23.18%	12.73%		
Grand Total	220	220	440		
	100.00%	100.00%	100.00%		

(* Significant at 5 percent level of significance, ** Significant at 1 percent level of significance)

The Table 1 shows the outcomes of the Chi-square test which was used to find the association among the time spent on the internet and area of customers. There is statistically significant association among the time spent on internet and area of online buyers in Haryana, examined by Chi- square value of 71.200, which was observed to be significant at 1% level of significance. Urban online buyers spend more time on the internet in comparison to their rural counterparts. 23.18% of the urban respondents have agreed to be spending more than 20 hours on the internet and 26.36% have been spending 6-10 hours on the internet suffering. On the other hand, 2.27% of the rural respondents have agreed to be spending more than 20 hours on internet surfing and 19.55% have been spending 6-10 hours on web/internet.

The Chi- square test applied on the results in Table 2 reveals that there is significant association between the urban and rural online customers with respect to time

spent by them on web surfing in a week as the calculated value of chi-square was significant. It is also conveyed from Table 2 that the value of Cramer's 'V' is .402, which is significant as well as acceptable, and also validates the results of above discussed Chi-square results. Both table values imply that there is an association between the urban and rural region digital customers with respect to time spent by them in a week on the internet.

Table: 2- Symmetric Measures (Time spent on internet region- wise)

Nominal by nominal	Value	Approximate Significance	Df
Phi	.402	.000	4
Cramer's V	.402	.000	4
No. of Valid Cases	440		

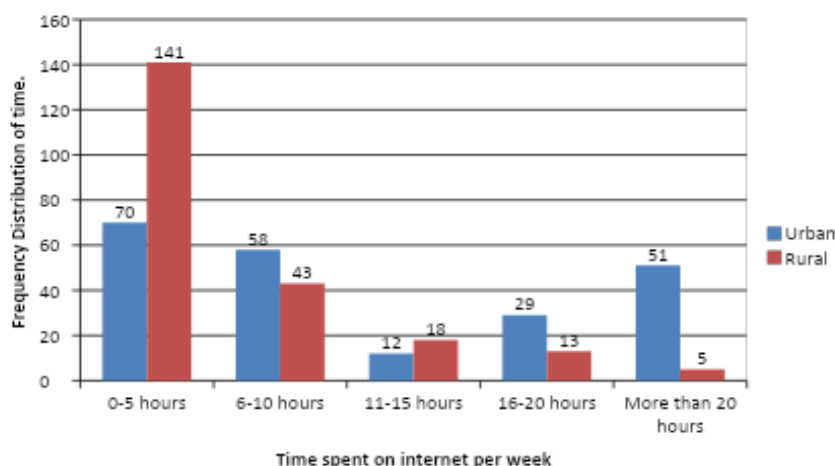


Fig.1- Chart/Bar Graph Frequency distribution time spent on Internet

The data given in Figure-1 clearly indicates that there is a remarkable difference in the time spent on the internet by the rural as well as urban online buyers.

Table: 3- Association between the kinds of brands purchased online and region of consumers

Kind of brand purchased online	Region			Chi-Square	p- value	
	Rural	Urban	Total			
Domestic	114	59	173	33.356	.000**	
	65.90%	34.10%	100.00%			
	Foreign	11	6			17
	64.71%	35.29%	100.00%			
	Both	95	115			250
	38.00%	62.00%	100.00%			

Grand Total		220	220	440		
		100.00%	100.00%	100.00%		

(* Significant at 5 percent level of significance, ** Significant at 1 percent level of significance)

The above Table establishes any association among the kind of brands purchased digitally and areas of customers. Haryana consumers have significant association among the kind of brands bought online, analyzed by Chi-square value of 33.356, which was obtained as the remarkable at 1% level of significance. Thus Haryana online consumers urban and rural regions have significant differences in the kind of brands they buy online. The majority of rural customers prefer to buy domestic products online followed by 65.90% whereas the urban customers like both domestic and foreign products online followed by 62.00%.

The Chi-square test used on the outcomes of Table 4 shows that there is a significant association among the urban and rural online buyers regarding the brands purchased digitally as the calculated value of chi-square was remarkable. It is also evident from Table 4 that the

value of Cramer's 'V' is .275, which is acceptable as well as significant, which certifies the outcomes of above discussed Chi-square outcomes. This shows that there is an association between urban and rural online customers regarding the product purchased online.

Table: 4- Symmetric Measures (Brands purchased online region-wise)

Nominal by nominal	Value	Approximate Significance	Df
Phi	.275	0.000	2
Cramer's V	.275	0.000	2
No. of Valid Cases	440		

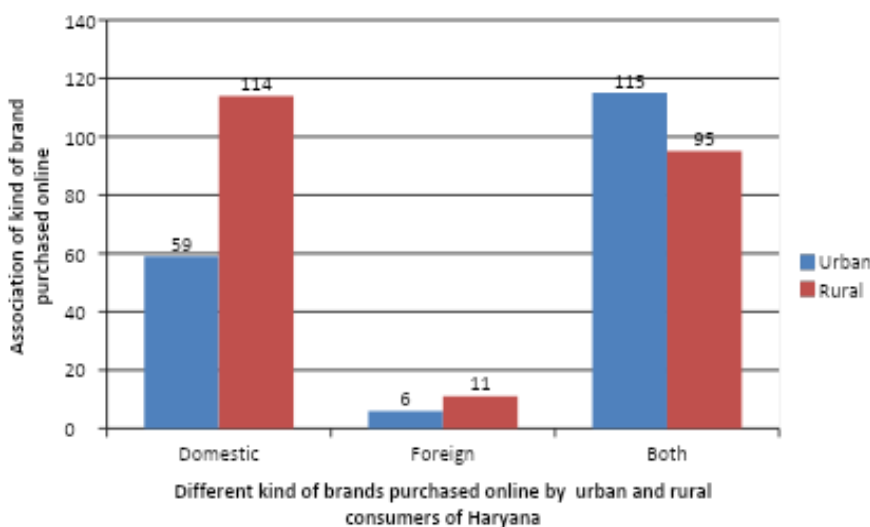


Fig 2- Chart/Bar Graph Association between the kinds of brands purchased online

Here the Bar Graph 2 shows that the rural consumers purchase more domestic products than urban consumers. This may be because they are not much aware about the foreign brands or other reasons like security, unknowingly etc.

Table: 5- Association of getting carried away by the heavy discounts and deals offered by the websites region of consumers

		Region			Chi-Square	p-value
Get carried away by the heavy discounts	Always	Rural	urban	Total		
		67	85	152		
		44.07%	55.92%	100.00%		

and deals offered by the websites	Never	38	16	54	18.749	.000**
		70.37%	29.63%	100.00%		
	Sometimes	115	119	234		
		49.14%	50.86%	100.00%		
Grand Total		220	220	440		
		100.00%	100.00%	100.00%		

(* Significant at 5 percent level of significance, ** Significant at 1 percent level of significance)

The Table 5 shows the outcomes of Chi-square test which was used to find out the association of getting carried away by the heavy discounts and deals offered by different websites, with areas of online customers. There is a statistically significant association of getting carried away by the heavy discounts and deals offered by websites, with different areas of online buyers in Haryana, examined by chi square value of 18.749, which was discovered to be acceptable at 1% level of significance.

Thus, there is significant difference among the rural and urban online buyers in Haryana with regards to getting carried away by the heavy discounts and deals offered by different websites. Most of the urban online buyers agreed that they sometimes get carried away by the discounts and deals followed by the consumers who always get carried away by the deals and discounts offered online. In the case of the rural consumers, most of them get carried away by the deals and discounts provided online followed by others who are never attracted towards the deals and discounts provided online.

Table: 6- Symmetric Measures (Getting carried away by heavy discounts region- wise)

Nominal by nominal	Value	Approximate Significance	Df
Phi	.206	.000	2
Cramer's V	.206	.000	2
No. of Valid Cases	440		

The Table 6 reveals that there is a significant association between the urban and rural online consumers with respect to getting carried away by heavy discounts as the calculated value of Chi-square was significant. It is also evident from Table 6 that the value of Cramer's 'V' is 0.206, which is acceptable as well as significant, which validates the results of above discussed Chi-square results. This implies that there is an association between the urban and rural online consumers with respect to getting carried away by heavy discounts.

Table: 7- Association between frequency of visiting online shopping websites for offers and region of consumers

		Region			Chi-Square	p- value
		Rural	Urban	Total		
Frequency of visiting online shopping websites for offers	Always	46	100	146	36.675	.000
		31.51%	68.49%	100.00%		
	Never	36	11	47		
		76.59%	23.40%	100.00%		
	Sometimes	138	109	247		
		55.87%	44.13%	100.00%		
Grand Total		220	220	440		
		100.00%	100.00%	100.00%		

(* Significant at 5 percent level of significance, ** Significant at 1 percent level of significance)

The table 7 shows the outcomes of the Chi-square test which was used to discover the association of frequency of visiting the online shopping websites for special offers and discounts with areas of consumers. There is statistically significant association of visiting the online shopping sites for special offers and discounts with area of consumers in Haryana, examined by chi square value of 36.675, which was discovered to be significant at 1% level of significance.

On the basis of the above table we can say that there is a difference between both respondents regarding frequency of visiting the online shopping websites for special offers and discounts. Majority of urban respondents visit the online shopping websites for special offers and discounts once a week, whereas majority of rural respondents visit these websites once in a month. Maybe the rural respondents do not have much importance to the promotional offers and rather they only shop for the products which they need or require.

The Chi-square test used in the outcomes of Table 8 shows that there is significant association among the

urban and rural online consumers regarding their frequency of visiting the online shopping websites for special offers and discounts as the calculated value of chi-square was significant. It is also evident from Table that the value of Cramer's 'V' is 0.289, which is strong and acceptable as well as significant, which validates the results of above discussed Chi-square results. This implies that there is an association among the urban and rural online consumers regarding their frequency of visiting the online shopping websites for special offers and discounts

Table: 8- Symmetric Measures (Frequency of visiting online shopping websites: Region -wise)

Nominal by nominal	Value	Approximate Significance	Df
Phi	.289	.000	2
Cramer's V	.289	.000	2
No. of Valid Cases	440		

Table: 9- Association between the experience from past online purchase and the region of consumers

		Region			Chi-Square	p- value
		Rural	Urban	Total		
Experience from past online purchase	Always	71	128	199	29.856	.000
		35.68%	64.32%	100.00%		
	Never	29	19	48		
		60.42%	39.58%	100.00%		
	Sometimes	120	73	193		
		62.18%	37.82%	100.00%		
Grand Total		220	220	440		
		100.00%	100.00%	100.00%		

(* Significant at 5 percent level of significance, ** Significant at 1 percent level of significance)

The data given in Table 9 indicates that there is a significant difference among the rural and urban consumers in Haryana, regarding their last purchase on the internet. The Majority of rural consumers get ideas from their past experience of online purchase, which happens sometimes only in 62.18%. The maximum number of urban consumers who get the idea of online purchase through their past experience lies in the category which is always along with the 64.32%. However, this shows that the majority of urban

consumers analyze their current online purchase based on their past experience in comparison with rural consumers.

The Chi-square test used on the outcomes of Table 10 shows that there is significant association among the urban and rural online consumers regarding the experience of the last online purchase made by them as the calculated value of chi-square was significant. It is also evident from Table that the value of Cramer's 'V' is 0.260, which is strong and acceptable as well as

significant, which certifies the results of above discussed Chi-square outcomes. This shows that there is an association among the urban and rural online consumers regarding the experience of the last online purchase made by them.

Table: 10- Symmetric Measures (Experience from last online purchase region- wise)

Nominal by nominal	Value	Approximate Significance	Df
Phi	.260	.000	2
Cramer's V	.260	.000	2
No. of Valid Cases	440		

Table: 11- Association of satisfaction with online shopping experience with region of consumers

		Region			Chi-Square	p- value
		Rural	Urban	Total		
Level of satisfaction with online shopping experience	Always	64	115	179	39.026	.000
		35.75%	64.25%	100.00%		
		35	5	40		
	Never	87.50%	12.50%	100.00%		
		121	100	221		
	Sometimes	54.75%	45.25%	100.00%		
220		220	440			
Grand Total		100.00%	100.00%	100.00%		

(* Significant at 5 percent level of significance, ** Significant at 1 percent level of significance)

Table 11 conveys the outcomes of the Chi-square test which was used to discover the association of satisfaction with digital shopping experience and area of the customers. There is a statistical association of satisfaction with online buying experience with regions of consumers in Haryana, found by chi square value of 39.026, which was discovered to be significant at 1% level of significance.

Thus, we can analyse that both e-consumers have differences in Haryana with regards to the level of satisfaction with their digital shopping experience. Rural customers are not much satisfied with their online purchasing experience as compared to their urban counterparts. This can again be justified by their less knowledge about the other product alternatives available online and lack of awareness and information.

The table 12 shows the significant association between urban and rural digital buyers in relation to satisfaction. The chi-square test used in the outcomes of Table shows that there is significant association among the urban and

rural digital customers regarding the satisfaction with online shopping experience as the calculated value of chi-square was significant. It is also evident from Table that the value of Cramer's V is 0.298, which is acceptable as well as significant, which certifies the results of above discussed Chi-square results. This shows that there is an association among urban and rural online consumers regarding the satisfaction with online shopping experience.

Table: 12- Symmetric Measures (Satisfaction with online shopping experience region-wise)

Nominal by nominal	Value	Approximate Significance	Df
Phi	.298	.000	2
Cramer's V	.298	.000	2
No. of Valid Cases	440		

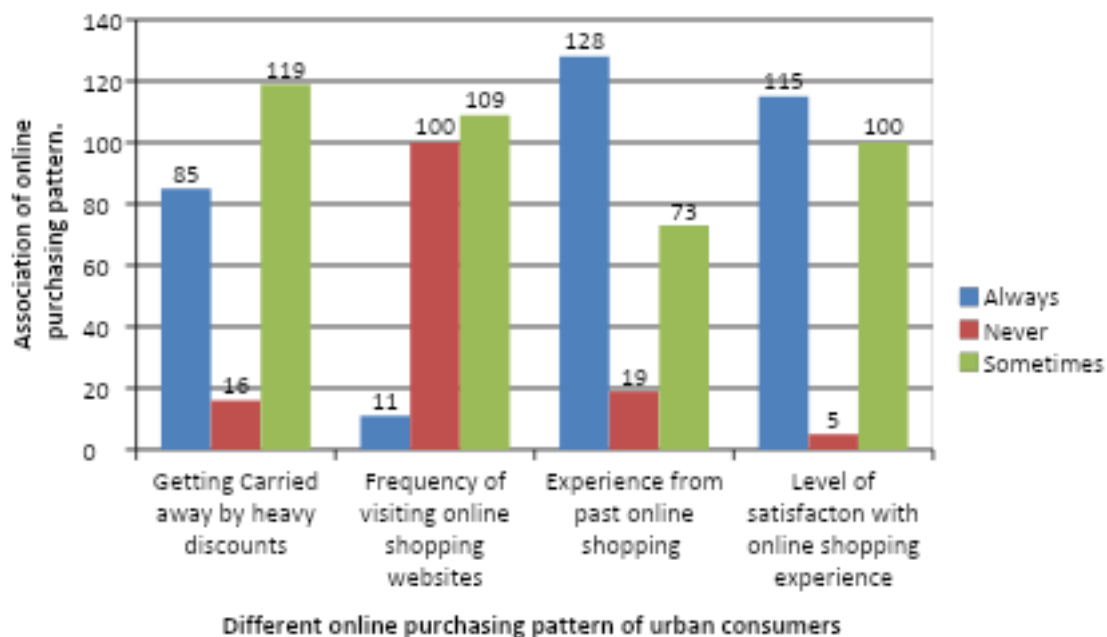


Fig.3- Chart/Bar Graph Association of online shopping e-pattern urban consumers

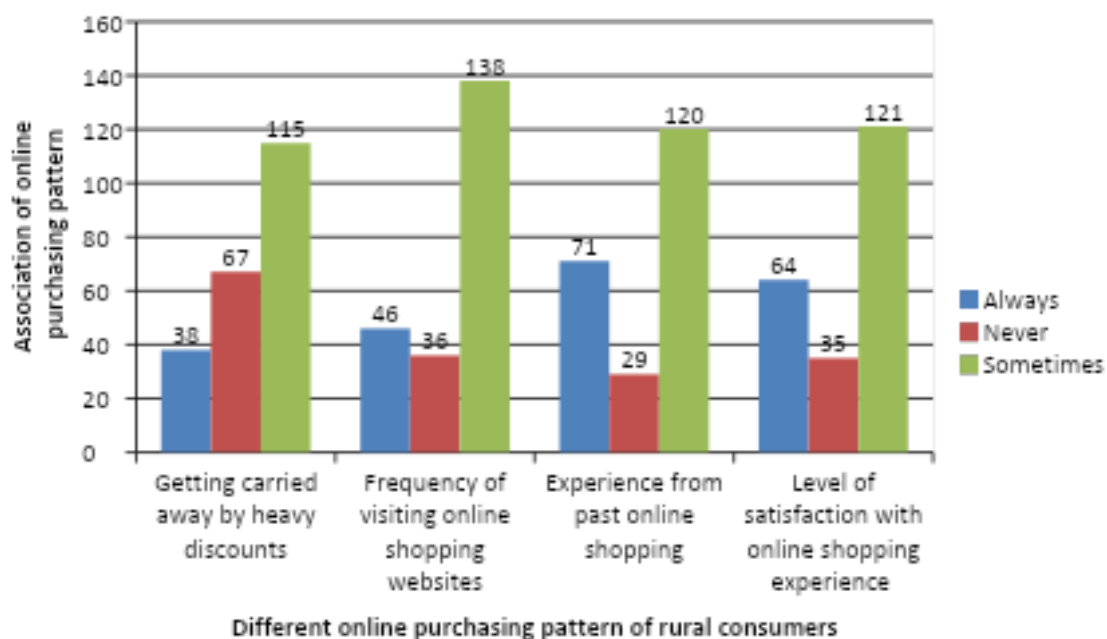


Fig.4- Chart/Bar Graph Association of online shopping e-pattern urban consumers

The above both Bar Graphs of urban and rural consumers represent the comparable difference among associations of online purchasing patterns which are getting carried away by the heavy discounts, Frequency

of visiting online shopping websites for offers, Experience from past online purchase and level of Satisfaction with online shopping experience.

Table: 13- Findings of Chi-Square Test

Variables	Chi-square	Df	p-value	Findings
Time spent on internet	71.200	4	.000**	Urban and rural online buyers have major difference in order to time period used on net.
Getting carried away by the heavy discounts	18.749	2	.000**	Urban and rural online buyers have difference in order to getting carried away by heavy discounts.
Brands purchased online	33.356	2	.000**	Urban and rural online buyers have major difference in order to brands purchased online.
Frequency of visiting online shopping websites for offers	36.675	2	.000**	Urban and rural online buyers have major difference.
Experience from past online purchase	29.856	2	.000**	Urban and rural online buyer have major difference in order to experience from past. Purchases.
Satisfaction with online shopping experience	39.026	2	.000**	Urban and rural online buyers have major difference in order to their satisfaction with online shopping experience.

Note: After analysing the multiple responses, we reject the null H_0 hypothesis.

VII. CONCLUSION

This paper is based on the comparison of the purchase pattern of rural and urban consumers in Haryana to buy online. Therefore, differentiations of rural and urban consumers were also done in regards to the elements which motivate them to purchase online. It was traced out that there is a significant difference in the purchase behaviour of the respondents in rural and urban sectors regarding the factors: time spent on internet, getting carried away by the heavy discounts, brands purchased online, frequency of visiting online shopping websites for offers etc.

Now on the basis of the above findings, it can be concluded that the elements representing significant differences between the rural and urban online consumers are more than the elements representing no significant difference. Thus, it can be summarized that the elements propelling online purchase behaviour among rural and urban consumers are not the same. Therefore, we are cancelling the null hypothesis H_0 , that is, purchase patterns of rural and urban consumers to make online purchases are not the same.

REFERENCES

- [1] Census of India. (2011). *Office of the Registrar General & Census Commissioner, India*. <http://www.census2011.co.in/>
- [2] Definition of marketing. (n.d.). *American Marketing Association*. <https://www.ama.org/AboutAMA/Pages/Definition-of-Marketing.aspx>
- [3] Eleventh annual report (Mimeo). (2015). Internet and Mobile Association of India. New Delhi, India.
- [4] Kaur, R., et al. (2015). Customer attitude towards online shopping in Chandigarh. *International Journal of Management and Commerce Innovations*, 4(3), 1-3.
- [5] Kaur, S. (2019). *Online purchase behavior of rural and urban consumers in Punjab: A comparative study*. <https://sites.google.com>
- [6] Kumar, S., & Savita, M. (2014). Status and scope of online shopping: An interactive analysis through literature review. *International Journal of Advance Research in Computer Science and Management Studies*, 2(12), 100-108.
- [7] Kumar, S. R., & Srinivasan, K. (2008). Consumer psyche & online branding, the Indian context-An exploratory study. *International Journal of Contemporary Practices and Management Thoughts*, 2(2). http://www.iimidr.ac.in/iimi/images/IMJ/Impact_Volume2_Issue2/CONsumer.pdf
- [8] Kurtz, D. L., & Clow, K. E. (1998). *Services marketing*. John Wiley & Sons.

- [9] Law, R., & Bai, B. (2008). How do the preferences of online buyers and browsers differ on the design and content of travel websites? *International Journal of Contemporary Hospitality Management*, 20(4), 388–400. <https://doi.org/10.1108/09596110810878516>
- [10] Lee, H., Lee, Y., & Yoo, D. (2000). The determinants of perceived service quality and its relationship with satisfaction. *Journal of Services Marketing*, 14(3), 217–231. <https://doi.org/10.1108/08876040010327250>
- [11] Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 140, 1–55.
- [12] Lin, W.-B. (2008). Factors influencing online and post-purchase behaviour and construction of relevant models. *Journal of International Consumer Marketing*, 20(3–4), 23–38. <https://doi.org/10.1080/08961530802129258>
- [13] Lohse, G. L., & Spiller, P. (1998). Electronic shopping. *Communications of the ACM*, 41(7), 81–87. <https://doi.org/10.1145/278476.278491>
- [14] Lyra. (n.d.). *Lyra Network*. <https://www.lyra.com>
- [15] Malhotra, N. K. (2001). Marketing research – An applied orientation. *Pearson Education Asia*, 83, 328.
- [16] Marketing91. (n.d.). *Marketing91*. <https://www.marketing91.com>
- [17] Mathen, N., & Abhishek. (2014). *Online promotions: Exploring the emerging opportunity in Indian market*. Indian Institute of Management Ahmedabad. <https://iimadh.ernet.in>
- [18] Newsdetail. (n.d.). *ASSOCHAM India*. <http://assocham.org/newsdetail.php?id=5274>
- [19] Ninth annual report (Mimeo). (2013). Internet and Mobile Association of India. New Delhi, India.
- [20] November2011. (2011). *International Journal of Computer and Communication Research*. <http://www.ijccr.com/November2011/9.pdf>