

The Consumer perception of Information Technology Tools in Organized Retail Industry: A study

¹Dr. Rupesh Rastogi & ²Vivek Kumar Singh

¹Assistant professor, Department of Business Administration, Azad Technical Campus, Lucknow, UP (India)

²Research Scholar, Bundelkhand University, UP (India)

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Corresponding Author

Email: rastogi_mba12[at]yahoo.com

ABSTRACT

Retail industry in general is one of the fastest growing sectors of the Indian Economy. Initially in India retailing was mostly unorganized. Indian Government was reluctant for opening the Indian retail sector for FDI. However in the year 1997 Indian Government allowed foreign direct investment in cash and carry wholesale and as such it paved the way for emergence of modern organized retail in India. Presently organized retail accounts for approx 5-6 % of the total retail revenue. Present retail industry operates on very thin margin and it is very much desirable that the resources of retail are optimized. Globalization of point of supply and point of sale generates tremendous amount of data, the manual processing of which is very difficult. Real time information is needed by almost all partners of retail like line managers, sales personnel and store managers and it can only be achieved by the use of IT tools. Information technology solutions are presently being used in various aspects of retail like finance and accounting, product display; data processing and analysis, radio trolleys, electronic labels, Radio Frequency Identification and customer relationship management etc. Further IT tools are also required to give customers a better experience. The present paper is an attempt to know the perception of organized retail customers of Indian State, Uttar Pradesh, regarding the application of IT tools in retail. For this purpose IT paraphernalia which are most frequently encountered by the customers have been selected for the study. The study was conducted in Kanpur, Allahabad, Varanasi and Agra (KAVAL) town of Uttar Pradesh. The data generated has been analyzed by statistical tools. The result of paper provides an insight of customers liking and satisfaction regarding various IT tools in retail. The result of the paper is useful for retail professionals, academicians, common man and in designing further IT assistance in retail.

1. Introduction

Initially the retail sector relied on human interaction only, however the conditions are changing now. Apple allows the user to pay for purchase and walking out of the store without even talking to anyone.

Information technology is now being used in various sectors of the economy. The IT revolution has also swept India. The results of IT application are being observed as better performance and cost efficiency in business where IT tools are being used. Large multinational retailers like Wart-Mart, Sansbury, Metro AG are continuously integrating more IT interventions in their businesses. The Indian retailers are also pursuing the suit.

IT assists retail in many ways. In all retail businesses there is always a requirement to collect exact information regarding consumer behavior, education standard, economic level and socio-cultural level on a regular basis. The information is needed from initial stage to last stage. The collected information and its analysis help a range of aspects of retail like managing merchandise, inventory management, procurement, and billing, designing customer loyalty schemes, stock replacement, shelf-space and even effective shop floor management. Simply put the data generated at the point of sales contains information regarding the type and number of products that a particular

customer purchased. An amassing of this information helps the retailer in inventory management. Information technology enables the businesses to control all business operations from a single point giving them the power of unified control. The application of IT tools is continuously expanding. The traditional electronic calculator is now replaced by the bar coding system which perform dual job of scanning the product information and summing the total purchase of the customer. The Information technology has also found ways to prevent thefts at the stores, electronic tags and scanners are being effectively used or the same.

Today IT tools also help in providing a better shopping experience to the customer and it is a game changing factor for retailers because almost all retailers offer almost similar kinds of merchandise. Better ambience and better experience helps in customer retention and repeated visits.

At present consumers are welcoming information technologies in retail, particularly the ones which attend to their most demanding issues like delay at the checkout counters, shortage of product information, difficulties in finding product's location and the stock out situations. Technology is also assisting in developing and maintaining good customer relations, pre purchase, post purchase short communiqué via electronic mode and SMS is becoming norm of the modern retail.

2. Literature Review

Jitendra Singh (2014) the globalization and privatization of retail has acted as a catalyst for the retail. The incorporation of information technology has benefited the retail industry in many ways. The consumer related information is highly sought after in the retail industry and the gathering and efficient management of this is possible through the use of the information technology. Information technology has given boost to the retail trade.

Aruna R. Shet (2015) stated that the use of information technology in retail sector has become possible due to specialization of information technology tools like radio frequency identification tools, computer system, internet and point of sale system. The application of information technology has made customer relationship management better. By using information technology the retailers are getting more value.

Ying Xie and Colin Allen (2013) stated that; the most commonly used information technology tools in retail are Radio-frequency identification, data mining and electronic data interchange. The electronic data interchange assists in quick exchange of documents and in reducing transaction errors. By using RFID retailers get accurate and relevant information about the customer. Data mining helps in reducing stock out situations and in forecasting demand. The information technology services in general helps in improving and optimizing business processes.

S.Ramesh Babu et.al., (2012) stated that; retailing is evolving as a high tech business. The Indian retail industry has been early adaptors of the information technology. At present customer is the King and providing best value to the customer is the objective of all retailers. Information technologies greatly assist retailers in providing better value to customer and manage cost. Gaining competitive advantage over other retailers however involves significant investment in information technology.

UKEssays (2015) Electronic data interchange is fast replacing the paper based purchase orders. Electronic data interchange depends upon information system. Electronic data interchange leads to faster data transfer and reduced errors. Information technology tools also help in forecasting sales and cash flow.

NewsCred (2013) Retailers are using information technology to provide secure billing, easy information storage e.t.c. By using information technology retailers are now offering value added services like IKEA offer augmented reality feature on its mobile app.

Bhagya (2015) the technology in retail sector is being used to reduce cost and keep the customer happy. Information technology also brings ease and efficiency in retail business. The use of technology at the point of sale has considerably reduced the time. One important development of information technology is self help kiosks which provide a variety of services to the customer and also draws customers. Price auditing is also convenient and easy via information technology tools.

Nirico Systems (2017) the information technology is helping retailers to solve the issues related with customer data management, transparency and tracking, global data synchronization etc.

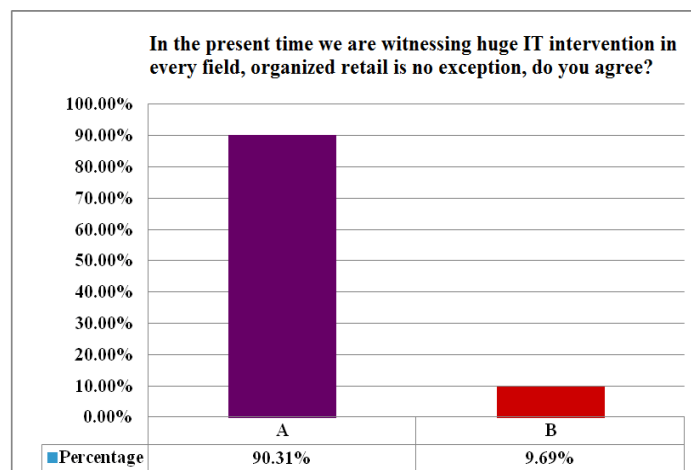
3. Research Methodology

This study is based on the primary data. In the present study the people of Lucknow, Kanpur, Allahabad, Agra and Varanasi who visit organized retail stores are taken for the study. A total of 400 questionnaires were distributed out of which 320 questionnaires complete in all respect were received and as such they were considered for the study.

4. Data Analysis

A. In the present time we are witnessing huge IT intervention in every field, organized retail is no exception, do you agree?

In the present time we are witnessing huge IT intervention in every field, organized retail is no exception, do you agree?							
	Agra	Allahabad	Varanasi	Lucknow	Kanpur	Total	%
A- Agree	47	56	52	88	46	289	90.31%
B- Disagree	3	4	8	12	4	31	9.69%
Total	50	60	60	100	50	320	100%



By analysis it is found that of organized retail market in KAVAL Town ≈ 90% people agree that there are huge IT interventions in organized retail and ≈ 10% people disagree with the opinion.

H0: Customers do not feel that the I.T. is being used in every field of organized retail.

H1: Customers feel that the I.T. is being used in every field of organized retail.

CROSSTAB / CHI-SQUARE TESTS						
OBSERVED FREQUENCIES						
	Agra	Allahabad	Varanasi	Lucknow	Kanpur	Total
A-Agree	47	56	52	88	46	289
B-Disagree	3	4	8	12	4	31
Total	50	60	60	100	50	320

CHI-SQUARE = 3.088, D.F. = 4, PROB. = .5431
 For this analysis the chi-square value is 3.088.

Here calculated value of chi-square is less than table value of chi-square at 5%, 1% and 0.1%. So we conclude that; the hypothesis is non significant.

Degree of freedom = 4

Inference: By analysis it is revealed that the I.T. interventions are used in every field of organized retail.

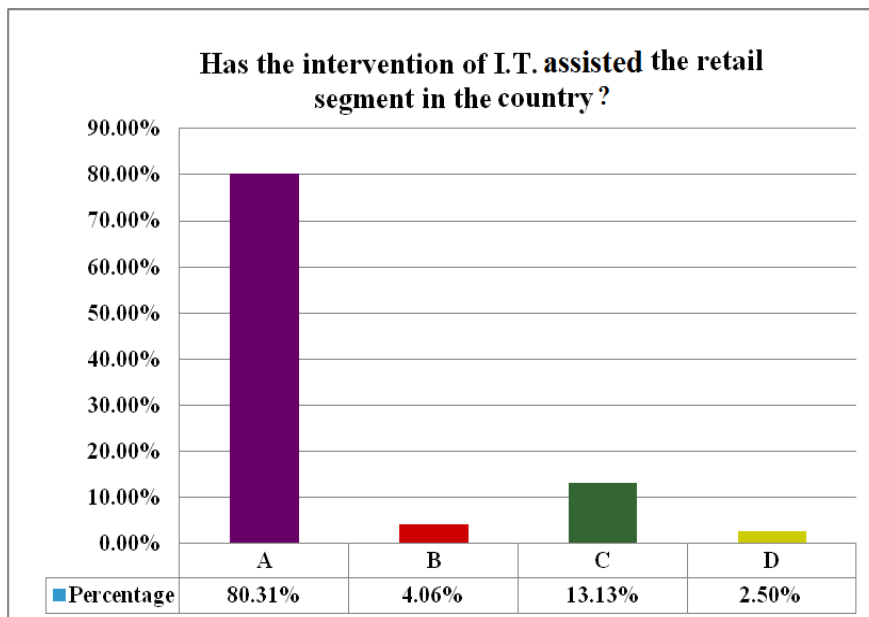
Table value of chi square test at 4 degree of freedom.

For this analysis the chi-square value is 3.088

Therefore null hypothesis is accepted and alternate hypothesis is rejected.

B. Has the intervention of I.T. assisted the retail segment in the country?

Has the intervention of I.T. assisted the retail segment in the country?							
	Agra	Allahabad	Varanasi	Lucknow	Kanpur	Total	%
A- Yes	38	48	46	92	33	257	80.31%
B- No	3	2	2	3	3	13	4.06%
C-To some extent	7	9	10	4	12	42	13.13%
D- Don't know	2	1	2	1	2	8	2.50%
Total	50	60	60	100	50	320	100%



By analysis it is found that in organized retail market of KAVAL Town = 80% people are of the opinion that; the intervention of I.T. aided the retail segment in the country while = 4% people say no to this opinion, = 13% people are of opinion that it assisted to some extent and = 3% people do not have any opinion on the issue.

H0: I.T. service has not assisted the organized retail business.

H1: I.T. services assisted the organized retail business.

CROSSTAB / CHI-SQUARE TEST						
OBSERVED FREQUENCIES						
	Agra	Allahabad	Varanasi	Lucknow	Kanpur	Total
A-Yes	38	48	46	92	33	257
B-No	3	2	2	3	3	13
C-To Some Extent	7	9	10	4	12	42
D-Don't know	2	1	2	1	2	8
Total	50	60	60	100	50	320

CHI-SQUARE = 18.297, D.F. = 12, PROB. = .1070

For this analysis the chi-square value is 18.297.
Degree of freedom = 12

Table value of chi square test at 12 degree of freedom.

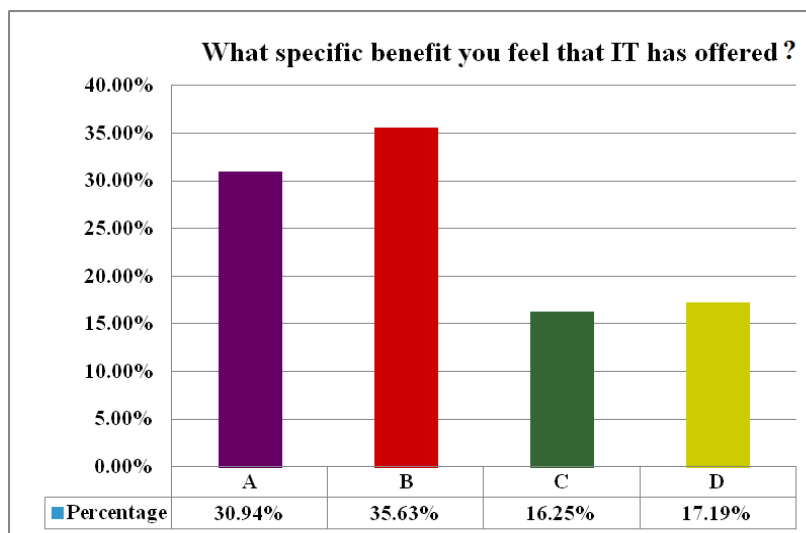
For this analysis the chi-square value is 16.247

Here calculated value of chi-square is less than table value of chi-square at 5%, 1% and 0.1%. So we conclude that the hypothesis is non significant.

Inference: By analysis it is revealed that the most customers of organized retail feel that; the I.T. services assisted the organized retail business.

C. What specific benefits you feel that IT has offered?

What specific benefits you feel that IT has offered?							
	Agra	Allahabad	Varanasi	Lucknow	Kanpur	Total	%
A-Time saving	14	22	18	32	13	99	30.94%
B-Security	18	20	22	37	17	114	35.63%
C-Convenience	11	8	8	13	12	52	16.25%
D-Reduction in human error	7	10	12	18	8	55	17.19%
Total	50	60	60	100	50	320	100%



By analysis it is found that in organized retail market of KAVAL Town = 31% people are of the opinion that; the IT services has reduced the total time spent in shopping, = 36% people are of the opinion IT services has enhanced security, = 16% people are of the opinion that; IT services has enhanced convenience and = 17% people feel that IT services has reduced human error.

Inference: By analysis it is revealed that the most customers of organized retail feel that; the I.T. services assisted the organized retail business.

H0: Majority of customer of the organized retail consider that the role of I.T. intervention is not insignificant in saving time at the organized retail outlet.

H1: Majority of customer of the organized retail consider that the role of I.T. intervention is insignificant in time saving at organized retail outlet.

CROSSTAB / CHI-SQUARE TEST						
OBSERVED FREQUENCIES						
	Agra	Allahabad	Varanasi	Lucknow	Kanpur	Total
A-Time saving	14	22	18	32	13	99
B-Security	18	20	22	37	17	114
C-Convenience	11	8	8	13	12	52
D-Reduction in human error	7	10	12	18	8	55
Total	50	60	60	100	50	320

CHI-SQUARE = 6.227, D.F. = 12, PROB. = .9042

Here calculated value of chi-square is less then table value of chi-square at 5%, 1% and 0.1%.

For this analysis the chi-square value is 6.227.

So we conclude that the hypothesis is non significant.

Degree of freedom = 12

Inference: By analysis it is revealed that the customers feel that the I.T. services enhanced security at organized retail store.

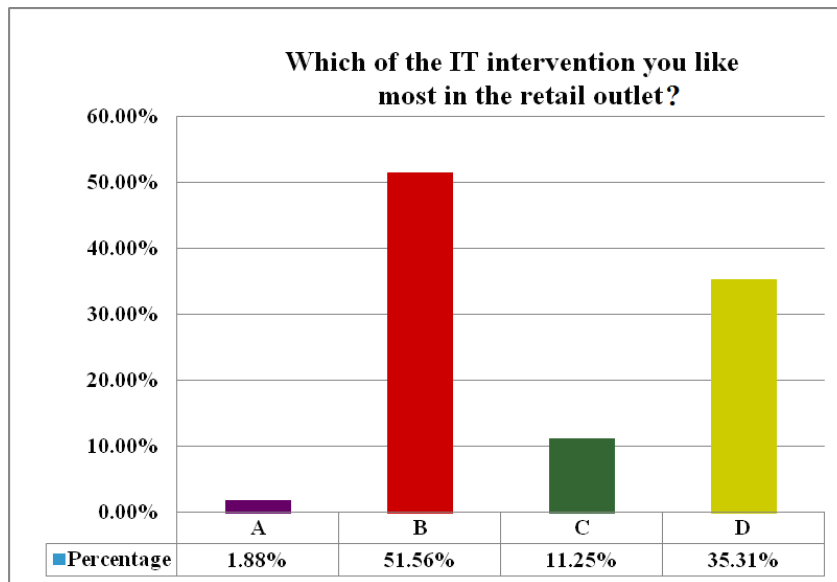
Table value of chi square test at 12 degree of freedom.

Therefore null hypothesis is accepted and alternate hypothesis is rejected.

For this analysis the chi-square value is 6.227

D. Which of the IT intervention you like most in the retail outlet?

Which of the IT intervention you like most in the retail outlet?							
	Agra	Allahabad	Varanasi	Lucknow	Kanpur	Total	%
A-Camera	1	1	2	2	0	6	1.88%
B-Electronic billing	28	31	34	52	20	165	51.56%
C-Door sensor	8	7	6	6	9	36	11.25%
D-Electronic price tag	13	21	18	40	21	113	35.31%
Total	50	60	60	100	50	320	100%



By analysis it is found that of organized retail market in KAVAL Town = 2% people like camera, = 52% people like electronic billing, = 11% people like the door sensor, = 35% people like electronic price tag.

H0: Majority customers of organized retail do not find electronic billing insignificant.

H1: Majority customers of organized retail find electronic billing insignificant.

CROSSTAB / CHI-SQUARE TEST						
OBSERVED FREQUENCIES						
	Agra	Allahabad	Varanasi	Lucknow	Kanpur	Total
A- Camera	1	1	2	2	0	6
B- Electronic billing	28	31	34	52	20	165

C- Door sensor	8	7	6	6	9	36
D- Electronic price tag	13	21	18	40	21	113
Total	50	60	60	100	50	320

CHI-SQUARE = 11.974, D.F. = 12, PROB. = .4478

For this analysis the chi-square value is 11.974.

Degree of freedom = 12

Table value of chi square test at 12 degree of freedom.

For this analysis the chi-square value is 11.974

Here calculated value of chi-square is less then table value of chi-square at 5%, 1% and 0.1%. So we conclude that the hypothesis is non significant.

Inference: By analysis it is revealed that the most of the customers like electronic billing.

Therefore null hypothesis is accepted and alternate hypothesis is rejected.

5. Conclusion

The consumer of today is truly Tech Savvy and is also eager to experience new frontiers of technology, they some times visit retail outlet for experiencing the new technology. As such the application of information technology leads to more foot fall in the store which may also translate into more sales. Customer now wants more and better dimensions of the customer service and IT helps in achieving the same. The application of IT tools also help in gaining edge over the competitor.

The results of the study indicate that; the customers are happy with the use of IT tools in the retail business.

Information Technology tools greatly enhance the customer satisfaction in retail business. They also help in reducing the overall time of the shopping and make it a very pleasurable experience. New frontiers of IT are constantly being developed and are finding application in retail and it is predicated that in times to come more new technologies will find its way into retail making the shopping more enjoyable for all partners.

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