

**STUDY OF FACTORS AFFECTING CUSTOMER BEHAVIOR TOWARDS
DIGITAL TECHNOLOGY IN ORGANIZED RETAIL SECTOR IN MAJOR CITIES
OF GUJARAT STATE**

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ABSTRACT

Some of the Digital technologies in present organized retail sector include Bar Code, Radio Frequency Identification (RFID), Digital Payments, Surveillance System, Cloud Computing, Retail Accounting Software that making daily operations at ease and provide retailers much needed competitive advantages. An objective of this study is to trace out the factors that attract consumers buying from Organized Retail Store, their perception on Benefits that Digital Technologies can provide and their perception on challenges in use of Digital Technologies which are affecting Customer Buying Behavior in Organized Retail Sector. Fundamentally, the study is designed as descriptive research with sample size of 500 respondents. Target market is major cities Ahmedabad, Surat, Rajkot and Vadodara of Gujarat state, and sampling techniques for survey is Convenience Sampling Method. By means of this study it will surely enhance the use of digital technologies for buying by reliable consumers and encourage the use of digital technologies even amongst the non-technology savvy buyers to experience the technology. Moreover, this study highlights that retailers also need to adopt the cluster of various Digital Technologies to sustain in the retail market.

Index Terms:

Digital Technology, Customer Service, IT, Organized Retail, Retail, Customer Satisfaction

INTRODUCTION

Retailing is the ultimate stage in the supply chain process (from manufactures to consumer), in which the retailer as an mediator, collects variety of goods and services from various sources including manufacturers and offers those to customers. Regarding the retail market of India, it has reached to US\$ 950 billion in 2018 and it is expected to reach to US\$ 1.1 trillion by 2020. India is the 5th largest chosen retail destination worldwide. The retail sector in India comprises organized, unorganized and e-commerce segments. The organized sector

(everything other than small family owned businesses) accounts of only 9% of the total market as of 2017. It covers registered retail outlets operating with compulsory licenses and generating the cash memo for each and every transaction of the sales. The unorganized retail sector in India accounts 88% of total market as of 2017 and 3% accounts for e-commerce segment. Retailing in India is undergoing a revolution due to change in demographic profiles, increase in income levels, technology and globalization that brings a dramatic shift in consumer zest and preference.

Various Digital Technologies used in Organized Retail Sector:

Radio Frequency Identification (RFID) offers information about the product and is works as the shopping cart with a scanner and touch screen computer, and facilitates other facilities related to billing to the customer. **Barcode Scanner** is an electronic device which scans and decodes the printed barcode, use stored data to compute the cost and produce invoice for a customer. **Surveillance/Safety Technology** use by Retailers who are facing many challenges in keeping the store secure. Security concerns for retailer mainly at purchase and at each level of items in the store. **Mobile Point of Sale (POS)** enables the purchase of goods while putting them in a shopping cart. **Cloud Computing** allows users to obtain computing capabilities regardless of their physical location through a shared physical infrastructure via internet. **Wi-Fi** helps in avoid the cost of connecting to a mobile operator network and being able to deliver data such as pricing in a more secure way.

Major Retail Layouts in Organized Retail Sector:

The Indian retail state has witnessed a significant shift in the preferences of consumers with the interference of organized retail in the form of modern retail layouts such as shopping malls, specialty malls, hypermarkets, departmental stores, brand stores etc. The layouts considered in present study are: **Departmental Stores** are type of emerging layouts and carry several product lines-usually clothing, home furnishings and household goods with each line operating as a separate department managed by dedicated buyers or merchandisers. **Shopping Malls** are the largest form of organized retailing is a mixture of product, service and entertainment, under a single roof. **Hypermarkets/Supermarkets** are the latest layouts located in or near the residential high streets. Hypermarkets carry a range of products varying from Foods, Furniture, Toys and Clothing; and Supermarkets catering to various shopper needs mainly focus on Food, Grocery and personal sales. **Convenience Stores** are small

outlets located nearer to the residential areas which open for longer hours for all the seven days of a week. These type of stores usually bring high turnover products which are convenient and suffice essential consumer needs. **Speciality Stores** cater to consumers who are looking for assorted brands at one store. For instance, sporting goods stores, apparel stores, furniture stores and bookstores are some of the examples of speciality stores. **Discount Stores** are where consumers preferring to pay a low price and so they visit Discount Stores or Factory Outlets, which offer discounts on the MRP, as they sell in bulk and have higher economies of scale with availability of large number of items with lesser price may be at wholesale price.

OBJECTIVES OF THE STUDY

1. To study factors that attract customers in buying from Organized Retail Store.
2. To compare the influence of various Digital Technologies on consumer purchase behavior in organized retail sector of Gujarat.
3. To investigate about the benefits of various Digital Technologies and also to identify challenges faced by the customers in adopting various Digital Technologies in organized retail sector.

RESEARCH METHODOLOGY

Fundamentally, the study is designed as descriptive research. For this research, get primary data in terms of a self-administered questionnaire used to collect the response. For this study, sampling frame is the Customer who is shopping from retail stores or shopping malls. Sample size of the study is 500 respondents. Target market is major cities Ahmedabad, Surat, Rajkot and Vadodara of Gujarat state, and sampling techniques for survey is Convenience Sampling Method. Use secondary data for different retailer's details, from various web sites, online sources and magazines, newspapers etc.

LITERATURE REVIEW

- **According to Jitendra Singh (2014)**, Information Technology contribution to modern retail sector in different ways which includes manpower cost saving, inventory management, monitoring of checkout operations, consumer awareness and others. IT innovations helps in creating customer loyalty and increase the level of customer satisfaction because all the time information is available to the customer and even for the

retailer. IT innovations give increase the retail sale and the future of IT is safe for retail growth.

- **Bhardwaj and Makkar (2007)** opine that major cities of Maharashtra will continue to dominate the Indian retail scene and despite strong growth in secondary and tertiary cities, these metros will still account for 40% of India's organized retail sector by 2008. They are large and different to provide accommodation a variety of new retail layouts, including malls, speciality malls, hypermarkets and big-box retailing.
- The Digital Technology has important role in area of the business model innovation. The technology helps to rationalize the company's internal activities and it's association with the internal as well as external stakeholders and involves the customers. Such Business model innovations at it's place in existing and new markets with digital technology helps to get closer to the customers (**Sorescu et al., 2011; Zott & Amit, 2012**).
- **According to Amirtha & Sivakumar, 2015**, Rapid urbanization, increased economic growth, rising middle class population and youth occupying major proportion of the total population have all influenced the Indian consumer behaviour and consumption patterns. However, the retailers who can effectively overcome some challenges like intensified competition, amplified land costs, feeble infrastructural facilities, shortage of trained human resource etc. would be the most powerful retailers to get a place in the minds of the customers, thereby sustain in the market.

DATA ANALYSIS

Demographic & Other Customer Preferences Analysis		Respondents	
		Frequency	Percentage
Gender	Male	262	52.4%
	Female	238	47.6%
Total		500	100.0%
Age	Upto 20 yrs.	17	3.4%
	21-30 yrs	222	44.4%
	31-40 yrs.	174	34.8%
	41-50 yrs.	57	11.4%
	51 yrs. & Above	30	6.0%
Total		500	100.0%

Education	Undergraduate	29	5.8%
	Graduate	332	66.4%
	Post Graduate	136	27.2%
	Others	3	0.6%
Total		500	100.0%
No. of Family Members	Up to 3	98	19.6%
	4 to 6	155	31.0%
	6 to 8	231	46.2%
	Above 8	16	3.2%
Total		500	100.0%
Type of Family	Joint	331	66.2%
	Nuclear	169	33.8%
Total		500	100.0%
Marital Status	Married	397	79.4%
	Unmarried	103	20.6%
	Divorced	0	0.0%
Total		500	100.0%
Profession	Govt. Employee	28	5.6%
	Private Employee	254	50.8%
	Business	65	13.0%
	Student	27	5.4%
	Housewife	126	25.2%
	Others	0	0.0%
Total		500	100.0%
Monthly Income - Family (in INR)	Upto 20,000	156	31.2%
	20,001 – 40,000	224	44.8%
	40,001 – 60,000	68	13.6%
	Above 60,000	52	10.4%
Total		500	100.0%
How frequently do you shop in these organized retail shops?	Weekly	9	1.8%
	2 to 3 times a month	333	66.6%
	Once in a month	104	20.8%
	Rarely	54	10.8%
Total		500	100.0%

Importance of different digital technologies in today's Retail Environment	Not at all (1)	Not very (2)	No Opinion (3)	Somewhat (4)	Extremely (5)	Weighted Mean
A. Bar Code Scanning	25	43	134	223	75	3.56
B. Radio frequency identification (RFID)	56	92	163	142	47	3.06
C. In-Store & Store Front Digital Signage	21	41	132	264	42	3.53
D. Electronic Point of Sale (EPOS)	27	87	155	164	67	3.31
E. Inventory Control Software	25	55	145	195	80	3.50
F. Surveillance & Security (CCTV)	30	55	77	281	57	3.56
G. Store Traffic Counters	25	62	112	214	87	3.55
H. Retail Accounting Software	52	67	217	114	50	3.09
I. Digital Payment System	20	45	147	226	62	3.53
J. Self Service Technologies for order	62	47	105	196	90	3.41
K. Electronic Data Interchange (EDI)	82	137	114	137	30	2.79
L. Websites, Online Carts & Online Advertising	36	114	182	141	27	3.02

Factors that attract to buying from Organized Retail Store	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Weighted Mean
A. Availability of necessary goods under same roof.	27	100	126	184	63	3.31
B. Shopping from an organized retail outlet is Status symbol.	32	88	162	150	68	3.27
C. Cater to the needs of all income groups.	48	63	177	152	60	3.23
D. Wide range of Branded products	65	95	152	140	48	3.02
E. Multiple brands under one roof helps comparison and ensures best buying with reasonable price	60	88	161	143	48	3.06
F. Superior Quality of Products.	60	88	171	133	48	3.04
G. Longer Opening and Convenient working hours.	65	95	194	113	33	2.91

H. Physical appearance/ Ambience inside Retail Store	28	88	153	163	68	3.31
I. Digital Technologies (Billing, Barcode, Digital Signage, RFID, CCTV Camera) in store	25	55	145	195	80	3.50
J. Trial rooms.	40	163	129	110	58	2.97
K. Accessibility & Self Pick-up of products.	25	63	111	213	88	3.55
L. Availability of Helpful & Well-mannered Staff	53	68	216	113	50	3.08
M. More than one counters for billing or checkout.	50	63	136	188	63	3.30
N. Honoring credit/debit cards/mobile app payment	35	53	111	213	88	3.53
O. Attractive Offers/ Schemes, Discounts on bulk buying and Customer Loyalty Cards	45	55	115	205	80	3.44
P. Well defined Goods return policies.	63	48	104	195	90	3.40
Q. Availability of After Sales Service	45	138	174	113	30	2.89
R. Availability of Parking Space	57	138	162	113	30	2.84

Perception on Challenges /problems in the use of Digital Technologies.	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Weighted Mean
A. Unavailability of technology in every locations	22	45	121	250	62	3.57
B. Reduction in efficiency due to untrained staff	35	80	127	171	87	3.39
C. Increases of cost of product because of tagging and Cost of technology (including Hardware & Software)	45	65	130	155	105	3.42
D. Lack of Customer acceptance (Confidentiality problem)	47	87	137	164	65	3.23
E. Suppliers do not have the capacity to adopt technology	40	40	127	188	105	3.56

Perception on Benefits that Digital Technologies can provide	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Weighted Mean
A. Secured Shopping Environment	25	62	139	162	112	3.55
B. Increases operational efficiency	60	55	125	155	105	3.38
C. More option of Digital Payment System	62	62	106	145	125	3.42
D. Provides Quicker Check-in & Check-out	50	62	138	130	120	3.42
E. Intimation of offers through Digital database	75	87	146	112	80	3.07
F. Support execution of better return program and Ease of replacement of defective goods	55	112	131	105	97	3.15
G. Authentic Printed Bill and Processing	17	70	128	170	115	3.59
H. Ease to shop online & tracking of transactions through Websites	52	75	149	122	102	3.29
I. Will reduce or Eliminate Theft	65	62	131	155	87	3.27
J. Easy delivery to any locations in online shopping through Websites	45	87	136	137	95	3.30

FINDINGS

The study aims to get primary data in terms of a self-administered questionnaire used from 500 respondents of major cities as 125 respondents from each Ahmedabad, Surat, Rajkot and Vadodara respectively of Gujarat state. In the demographic profile of the respondents' majority of gender of are male, education of the respondents are Graduate, and number of family members are 6 to 8 members in the family. Marital status of the majority respondents are Married. Occupations of the majority respondents are mainly Private Employee. Monthly income of the majority respondents is range between Rs.20001- Rs.40000. The frequency of visit observed 2 to 3 times a month by the majority of respondents.

Majority of the respondents agree with factors like accessibility & self-pickup of products, Honoring credit/debit cards/mobile app payment and Digital Technologies (Billing, Barcode, Digital Signage, RFID, and CCTV Camera) in store that attract buying from Organized Retail Store. Majority of the respondents disagree with factors like availability of parking space, availability of After Sales Service, longer opening & convenient working hours and availability of trial rooms that attract buying from Organized Retail Store.

Majority of the respondents agree with Importance of different Technologies in today's Retail Environment mainly are Bar Code Scanning, Surveillance & Security (CCTV), Store Traffic Counters, In-Store & Store Front Digital Signage and Digital Payment System.

Majority of the respondents agree with benefits are realized like authentic printed bill and processing, secured shopping environment, more option of digital payment system, provides quicker check-in & check-out etc. by the use of Digital Technologies with shopping from organized retail stores. Majority of the respondents agree with Challenges are realized like unavailability of technology in every location and suppliers do not have the capacity to adopt technology etc. by the use of Digital Technologies with shopping from organized retail stores.

CONCLUSION

In conclusion as retail industry is fastest growing sector, every retail store must give importance to service quality variables like easy access to store, wide range of product, and availability of products with well trained staff, etc. The study ascertains that the Digital Technologies (i.e. Billing, Barcode, Digital Signage, RFID, CCTV Camera etc.) in store has significant importance that attract customers to buying from Organized Retail Store. Further to this the study focuses that mainly the Bar Code Scanning and Surveillance & Security (CCTV) has significant importance amongst various digital technologies in today's Retail Environment. This study also ascertains with the benefits by the use of Digital Technologies which are realized to customers like authentic printed bill and processing, secured shopping environment as well as more option of digital payment system etc. with shopping from organized retail stores. Therefore, the customer acceptance must be increased by augmenting the use of various digital technologies with store features. The high price of various digital technologies is a challenge that affects both the retailers and customers. Indian as well as international technologies providers are now working on a range of advanced innovations in retails like self-service kiosks, mobile solutions, cloud computing, multi-channel customer management etc. that will simplify routine operations and provide a competitive advantage to retailers. The use of technology is key factor in retail sector currently. By means of this study it will surely enhance the use of digital technologies for buying by reliable consumers and encourage the use of digital technologies even amongst the non-technology savvy buyers

to experience the technology. Moreover, this study -reveals that retailers also need to adopt the cluster of various Digital Technologies to sustain in the retail market.

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