

Analysis of the Awareness Level of Customers about the different Retailing Technologies

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Received: 01 Aug 2023; Received in revised form: 03 Sep 2023; Accepted: 10 Sep 2023; Available online: 25 Sep 2023

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Abstract— *The increased digitization of the world has created a new kind of shopper. Consumers are demanding more and more from their in-store experience, forcing companies to innovate quickly. The main aim of the study is Analysis of The Awareness Level of Customers About the Different Retailing Technologies. We will design a self-administered survey using multi-item constructs for measuring the phenomena of interest. We will utilize appropriate scales, such as those measuring levels of agreement, significance, and satisfaction. According to the results of this study, consumers have a broad knowledge of technological advancements but a narrower understanding of vending machines.*

Keywords— *Retailing, Technologies, Customer, Shopper, Awareness, Digitization*

I. INTRODUCTION

The increased digitization of the world has created a new kind of shopper. Consumers are demanding more and more from their in-store experience, forcing companies to innovate quickly. Furthermore, the acceleration of innovation in retail due to new technologies has made it more difficult to keep up with 2020 retail trends. Plus, e-Commerce has emerged as an almost monopolistic power in several geographic markets, providing every customer with enhanced bargaining power when selecting between retailers. As online shopping quickly cannibalizes sales at traditional brick-and-mortar retail stores, it has become imperative for all retail companies to pay close attention to the most important innovations in the industry. Fortunately, we have it covered. Check out our list of the few most important innovations in retail right now:

A. Virtual and Augmented Reality

When analyzing retail innovation, virtual and augmented reality platforms have huge implications on the future of commerce. Some companies have already adopted this technology, implementing it in both online and brick-and-mortar sales channels.

B- Omnichannel Commerce

While omnichannel commerce has been widely adopted within the retail space, it is impossible to ignore because of

its critical importance to the industry. At its core, omnichannel commerce is a full integration of all sales channels, which improves staff efficiency and provides invaluable data and analytics to a retailer. The idea of solely employing one or two sales channels is quickly fading. Companies that may have originally started as online-only retailers are opening their own brick-and-mortar outlets, and vice versa. Companies are increasingly marketing and selling their products through social media sites and other third-party outlets, simultaneously accruing data about individual shoppers. However, omnichannel commerce is more complex than simply expanding to several channels. The key to successful omnichannel commerce is a full integration of different sales channels, which allows shoppers to seamlessly move between them, allowing retailers to easily monitor and store information about consumers' preferences forehanced targeting techniques. As more and more retailers employ this method, shoppers will grow to expect this type of service on a consistent basis.

II. LITERATURE REVIEW

Nisreen Ameen et.al (2020) The method in which consumers engage with businesses is being completely transformed by artificial intelligence (AI). Few studies have

examined the actual effects of AI on the customer service they get. Therefore, the purpose of this research is to examine how AI may be used to enhance the shopping experience for AI-enabled consumers. Based on the trust-commitment theory and the service quality model, we present a new theoretical framework. Customers who have utilized an AI-enabled service from a cosmetics company were invited to take part in an online survey. Using partial least squares-structural equation modeling, we analyzed 434 answers. The results show that trust and perceived sacrifice play a crucial role as mediators between the perceived value of ease, personalisation, and the quality of services offered by artificial intelligence. Relationship commitment has a major impact on the quality of the customer experience provided by businesses using artificial intelligence. Understanding the direct influence of relationship commitment on AI-enhanced customer experience as well as the intermediary effects of trust and perceived sacrifice expands the current body of studies. The research also has real-world applications for businesses who want to use artificial intelligence (AI) in customer services.

Deepika Jhamb, Ravi Kiran (2011) - Changing demographics and rising living standards in urban areas have led to explosive expansion in India's retail industry. The Indian economy is thriving, and that growth is being driven by the retail sector. India is quickly becoming one of the most promising marketplaces for local and international retailers because to its growing economy, increasing income dynamics, increased awareness, and large share of young consumers. The goals of this research were to conduct a SWOT analysis of organized retail in India; to identify the drivers which impact the development of the Indian retail industry; and to examine the primary elements influencing the retail business. The research shows that infrastructural development, rising incomes, and shifting customer demographics are the most important forces propelling the expansion of India's organized retail sector. A store's location, management style, and the payment of competitive wages to employees all contribute to the efficiency and profitability of merchants.

Meera Mathur and Sumbul Samma (2011) - There is no private sector that is more extensive than retailing. More than 10% of India's GDP and 8% of the workforce are directly or indirectly involved in this sector, making it the country's most important economic activity. One growing technology that helps marketers keep up with the ever-changing marketing landscape is customer relationship management. Companies and stores in Udaipur's organized retail sector are focusing on and catering to a diverse range of customers from rural and urban areas, as well as those with low, medium, and high incomes. The purpose of this research is to assess the CRM strategies used by shops in

Udaipur. Customer relationship management (CRM) is widely used in sectors like the hospitality and service industries, but it is also gaining traction in the retail sector. The study's findings suggest that consumers are quick to abandon their previous preferences and abandon their allegiance to a brand, and that it is the company's customer relationship management (CRM) that will convince them to return to the store.

Dikshit (2011) 40 million Indians are estimated to be employed in India's retail and logistics industries. In India, most stores are independently owned and operated. Larger format convenience shops and supermarkets were only found in major metropolitan areas in 2010, making up roughly 4% of the business. The Indian government prohibited FDI (foreign direct investment) in multi-brand retail until 2011. This meant that no foreign companies could own any Indian convenience shops, supermarkets, or other retail establishments. Additionally, single-brand retail was restricted to 51% ownership and required additional red tape to operate.

Harleen Kaur (2011) -Big Bazaar, which is owned by the Future Group, is a hypermarket that sells a wide variety of high-quality products at competitive costs. Both large and small communities in India are home to a Big Bazaar, which has more than 140 locations around the country. The size and diversity of a bazaar might bring in many more clients. By extending their services to include home delivery, they may boost consumer happiness. One of India's most important commercial sectors is Big Bazaar. The workplace is pleasant, and employees have access to a variety of amenities designed to improve their efficiency in serving customers. Workers and supervisors have a solid working connection. Staff members take their roles seriously and provide services that consistently impress clients.

III. METHODOLOGY

3.1 Data Collection Instruments

We will design a self-administered survey using multi-item constructs for measuring the phenomena of interest. We will utilize appropriate scales, such as those measuring levels of agreement, significance, and satisfaction.

3.2 Sources of Data

Primary and secondary sources will be used to compile the data. Both the views of retail shop management and consumers will be used as main sources in this research. Reports, canonical texts, journals, magazines, websites, newspapers, etc. all qualify as secondary sources.

3.3 Sampling technique

Customer feedback will be gathered using a technique called non-probabilistic purposive sampling.

3.4 Sample

There are shops in operation in India, and they make up the population. We expect 480 consumer answers overall.

3.5 Statistical techniques

The hypotheses will be tested using inferential techniques including correlation, chi-square, regression, analysis of variance, and discriminant analysis.

IV. RESULTS

4.1 AWARENESS LEVEL OF CUSTOMERS ABOUT THE DIFFERENT RETAILING TECHNOLOGIES

Customers from all around Gujarat were polled to determine their familiarity with various forms of in-store technology, including video surveillance (CCTV), electronic payment processing (E-Payments), in-store announcement screens, and vending machines. On a scale from 1 (not at all aware) to 5 (extremely well aware), we found that people's levels of awareness ranged from 2 (somewhat aware) to 3 (somewhat aware) to 4 (somewhat aware) to 5 (very well aware).

4.1.1: Awareness of Customers towards Online Retailing

Table No. 4.1: Online Retailing

	Scale	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very Little Extent(1.00)	54	11.3	11.3	11.3
	A Little Extent (2.00)	40	8.3	8.3	19.6
	Undecided (3.00)	88	18.3	18.3	37.9
	To Some Extent (4.00)	192	40.0	40.0	77.9
	To Large Extent (5.00)	106	22.1	22.1	100.0
	TOTAL		480	100.0	100.0
Mean score: 3.5333					

Inference: Out of 480 consumers polled in the state of Gujarat, roughly 62.1% said they were familiar with internet shopping as a technology used by retailers (see

table no. 4.1 above). The average grade of 3.5333 supports this claim as well.

4.1.2: Awareness of Customers towards QR Code

Table No. 4.2: QR Code

	Scale	Frequency	Percentage	Valid Percentage	Cumulative Percentage
	Very Little Extent(1.00)	42	8.8	8.8	8.8

Valid	A Little Extent (2.00)	54	11.3	11.3	20.0
	Undecided (3.00)	66	13.8	13.8	33.8
	To Some Extent (4.00)	196	40.8	40.8	74.6
	To Large Extent (5.00)	122	25.4	25.4	100.0
	TOTAL	480	100.0	100.0	
Mean score: 3.6292					

Inference: Out of 480 consumers polled in the state of Gujarat, roughly 62.1% said they were familiar with internet shopping as a technology used by retailers (see table no. 4.2

above). The average grade of 3.5333 supports this claim as well.

4.1.3: Awareness of Customers towards RFID

Table No. 4.3: RFID

	Scale	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very Little Extent(1.00)	44	9.2	9.2	9.2
	A Little Extent (2.00)	64	13.3	13.3	22.5
	Undecided (3.00)	82	17.1	17.1	39.6
	To Some Extent (4.00)	158	32.9	32.9	72.5
	To Large Extent (5.00)	132	27.5	27.5	100.0
	TOTAL	480	100.0	100.0	
Mean score: 3.5625					

Inference: According to the data in table 4.80 above, roughly 60.4% of the 480 consumers polled throughout the state of Gujarat knew what RFID was and how it was

utilized in businesses. The median rating of 3.5625 also supports this.

4.1.4: Awareness of Customers towards Vending Machine

Table No. 4.4: Vending Machine

	Scale	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very Little Extent(1.00)	64	13.3	13.3	13.3
	A Little Extent (2.00)	58	12.1	12.1	25.4
	Undecided (3.00)	98	20.4	20.4	45.8
	To Some Extent (4.00)	144	30.0	30.0	75.8
	To Large Extent (5.00)	116	24.2	24.2	100.0
	TOTAL		480	100.0	100.0
Mean score: 3.3958					

Inference: Out of 480 consumers polled in the state of Gujarat, roughly 54.2% knew what a vending machine was and how it was utilized in shops (see table no. 4.4 above). The median mark of 3.3958 points supports this.

4.1.5: Awareness of Customers towards E-Payments

Table No. 4.5: E- Payments

	Scale	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very Little Extent(1.00)	54	11.3	11.3	11.3
	A Little Extent (2.00)	40	8.3	8.3	19.6
	Undecided (3.00)	88	18.3	18.3	37.9
	To Some Extent (4.00)	192	40.0	40.0	77.9
	To Large Extent (5.00)	106	22.1	22.1	100.0
	TOTAL		480	100.0	100.0

	Mean score:3.5333
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Inference: According to the data in table 4.12 above, roughly 62.1% of the 480 consumers polled throughout the state of Gujarat knew about E-Payments as a technology employed in the retail businesses. The mean score of 3.5333 also supports this.

4.1.6: Awareness of Customers towards in store Announcements

Table No. 4.6: In store announcement

	Scale	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very Little Extent(1.00)	42	8.8	8.8	8.8
	A Little Extent (2.00)	54	11.3	11.3	20.0
	Undecided (3.00)	66	13.8	13.8	33.8
	To Some Extent (4.00)	196	40.8	40.8	74.6
	To Large Extent (5.00)	122	25.4	25.4	100.0
	TOTAL		480	100.0	100.0
Mean score: 3.6292					

Inference: According to the data in table no. 4.6 above, over 66.2% of the 480 consumers polled throughout the state of Gujarat knew about In-store Announcement as a technology employed in the retail businesses. The mean score of 3.6292 supports this conclusion.

4.1.7: Awareness of Customers towards Video Surveillance (CCTV)

Table No. 4.7: Video Surveillance (CCTV)

	Scale	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very Little Extent(1.00)	54	11.3	11.3	11.3
	A Little Extent (2.00)	40	8.3	8.3	19.6
	Undecided (3.00)	88	18.3	18.3	37.9

	To Some Extent (4.00)	192	40.0	40.0	77.9
	To Large Extent (5.00)	106	22.1	22.1	100.0
	TOTAL	480	100.0	100.0	
Mean score: 3.5333					

Inference: According to the data in Table 4.7, over 62.1% of the 480 consumers polled from throughout the state of Gujarat reported being familiar with video surveillance

(CCTV) as a technology used by retailers. The median mark of 3.5333 also supports this.

4.1.8: Mean Score Statistics:

Table No. 4.8: Mean Score Statistics Mean Score Statistics

		Online Retailing	QR Code	RFID	Vending Machine	E-Payment	In store Announcement	Video Surveillance (CCTV)
N	Valid	480	480	480	480	480	480	480
	Missing	0	0	0	0	0	0	0
Mean		3.5333	3.6292	3.5625	3.3958	3.5333	3.6292	3.5333

Inference: The average of a set of data is calculated by dividing the total by the total number of data points in the set. It's a frequent way to explain where a variable falls on a scale.

Customers' awareness levels were indicated by parameters with Means more than 3.00, whereas Means equal to 3.00 suggested a neutral reaction and Means less than 3.00 showed a very low degree of awareness.

Since the mean score of the replies is more than 3 in table no. 34 above, the researcher concludes that the consumers polled are knowledgeable about the technologies used by Retail Stores located across the state of Gujarat.

V. CONCLUSION

According to the results of this study, consumers have a broad knowledge of technological advancements but a narrower understanding of vending machines. Based on

these findings, it's clear that "better customer service at an affordable price" is a major motivating factor for consumers when it comes to choosing between different implementations of technology. This study found that although consumers were generally content with many aspects of today's retail technology, they were not yet content with credit payment technology because of the privacy concerns it raises. According to surveys of future expectations, consumers are most interested in innovations that will make "Hassle Free Shopping" possible. So, this function must be carefully supported by the technologies of the future. This study shows that consumers' age, gender, education, employment, and income do not play a major impact in shaping their attitudes regarding the use of retailing technology.

When service providers simplified the decision-making process and made it easy for shoppers to reap the advantages of the technology they were looking for,

consumer satisfaction with the technology employed in retail establishments rose. To increase consumer happiness, it was crucial to provide helpful pre- and post-purchase assistance in a variety of handy ways. Retailers now have a lot more leeway to cater to each individual client because to advancements in Data Base Management, effective Data Mining methods, and real-time monitoring of data through ERP software. Software like Customer Relationship Management (CRM), Human Resource Information Systems (HRIS), and Spreadsheets allowed stores to zero in on the most lucrative clients.

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